

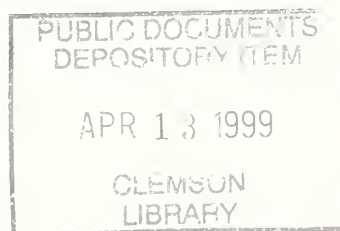
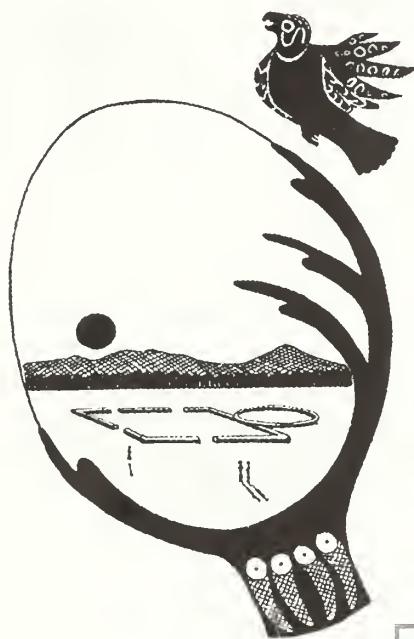
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People Who Came Before: The Hopewell Culture Curriculum Guide



Activities for the fourth-sixth grade student

Acknowledgements

The People Who Came Before: the Hopewell Culture Curriculum Guide was prepared by park ranger Rebecca Jones, teachers Anne Gibson, Cathy Nelson and Mecca Caron. The guide was reviewed by Robert Petersen, Robert Burgoon, Bret Ruby and John Neal. Some illustrations were drawn by local student and volunteer Steve Patrick. Funding for this project was provided by the Mead Fine Paper Division and the National Park Foundation as part of the Parks as Classrooms program.



the non-profit partner of the National Park Service chartered by Congress to preserve, protect, and enhance the National Parks.

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As the nation's principal conservation agency, the National Park Service has responsibility for many of our nationally-owned public lands and natural resources. The Park Service strives to foster sound use of the public lands and their water resources; protect fish, wildlife, and biological diversity in our national parks; preserve the environmental and cultural values of our national parks and historical places; and provide for the enjoyment of life through outdoor recreation.





United States Department of the Interior

NATIONAL PARK SERVICE

Hopewell Culture National Historical Park
16062 State Route 104
Chillicothe, Ohio 45601-8694

IN REPLY REFER TO:

A major element of the mission of the National Park Service is public education. The National Park Service has a unique opportunity as a federal land and resource management agency to use, in partnership with educators, its resources as living classrooms. The rich diversity of cultural and natural resources that characterize our great national heritage is found in our national parks. The hope is that through education people of all ages will gain a greater understanding of and appreciation for these resources and support their continued preservation.

The park staff greatly values the working relationships and partnerships it has developed with educators. This curriculum will offer many more opportunities to strengthen and expand those relationships. As educators, students, and the park staff use the curriculum, it is important that the experiences are shared and the curriculum refined to better serve the needs of students and educators alike.

The curriculum is the result of the outstanding contributions of educators, volunteers and National Park Service employees. A number of people have freely given of their time and abilities to make it available. In addition, it would not have been possible without the generous support of the Mead Fine Paper Division and the National Park Foundation.

The stories of the Hopewell culture, of archeology, and of national parks are exciting and meaningful to our lives today. We seek to share them with you through this curriculum and other park programs.

Sincerely,



John D. Neal
Superintendent

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*Lessons adapted from *Intrigue of the Past: A Teacher's Activity Guide for Fourth through Seventh Grades*. See Section 4, Other Sites and Resources for additional information.

People Who Came Before: The Hopewell Culture Curriculum Guide

Activities for the fourth-sixth grade student

Preface

The People Who Came Before: The Hopewell Culture Curriculum Guide is an educational program developed by Hopewell Culture National Historical Park with funds provided by the Mead Fine Paper Division and the National Park Foundation. The ultimate goal of this project is to assist students in understanding Ohio's rich prehistoric past and the need to preserve and protect archeological resources.

Hopewellian enclosures once dotted the landscape throughout southern Ohio. Yet comparatively few of these sites survive. Today, Hopewell sites administered by the National Park Service and the Ohio Historical Society are some of our few links to the culture that prevailed in this area over 2000 years ago.

Many people find a link to the past in places such as archeological sites where they can connect with lifeways and peoples of a bygone era. Through archeological sites people can experience a tangible association with their cultural heritage. As a society, we can benefit from an understanding of how people lived before us in the very places we now live. How did people before us solve problems similar to ours? What can we learn from the experiences of the Hopewell? How did their environment affect them? The answers to these questions can be found in the sites that survive today.

The National Park Service is the steward of 375 diverse units, many with prehistoric archaeological sites found within their boundaries. The National Park Service, and its non-profit partner the National Park

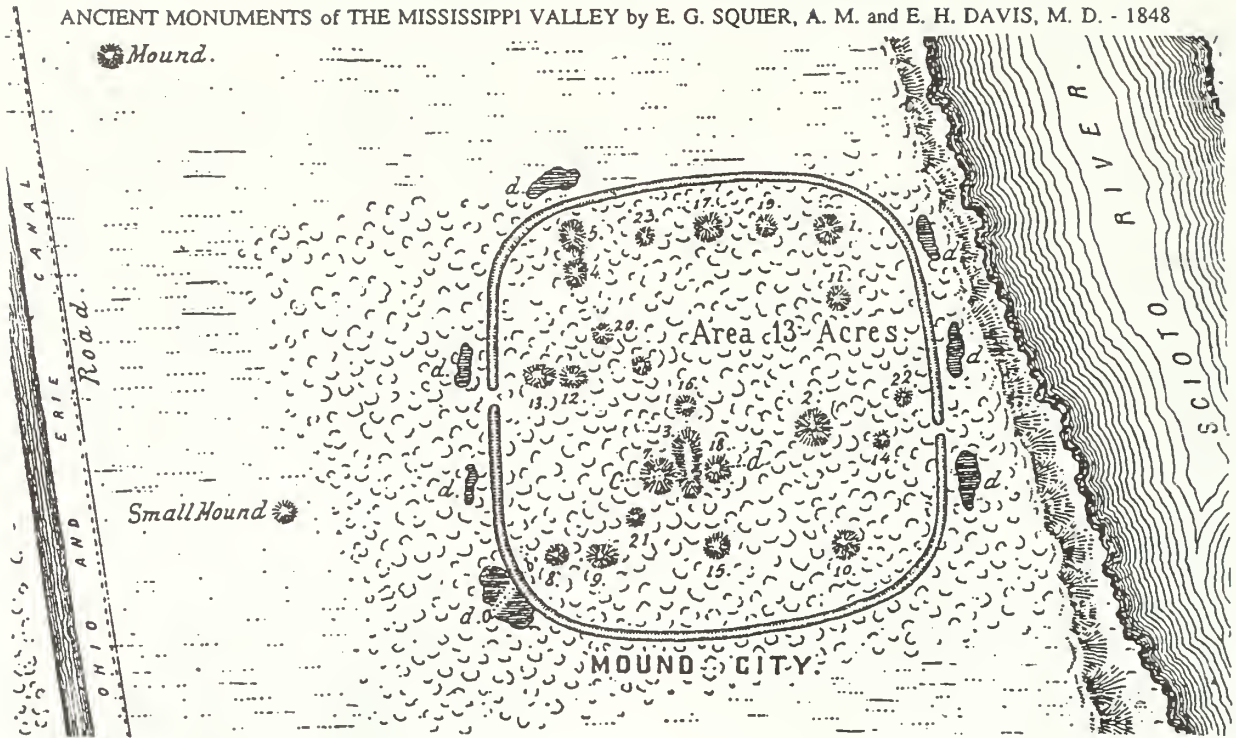
Foundation through its Parks as Classrooms program, is committed to teaching students about their nation's rich and diverse cultural heritage. This guide reflects that commitment.

Archeologists, park service employees and educators have reviewed drafts of this guide and provided many suggestions. Many volunteers have provided invaluable time and effort in assisting with various aspects of compiling this guide. Many thanks to all who were involved.



Introduction

ANCIENT MONUMENTS of THE MISSISSIPPI VALLEY by E. G. SQUIER, A. M. and E. H. DAVIS, M. D. - 1848



Thousands of years before Europeans arrived in the Scioto River valley, other peoples lived here. Like those who followed, they too prospered, struggled and endured. The legacy they left on the landscape reminds us that we follow in a long line of human occupation.

The midwest, and southern Ohio in particular, has a rich prehistoric past. Sites such as Mound City Group, Seip Earthworks and Fort Ancient offer the opportunity to travel back in time. At some sites, you see a landscape that has changed little over the centuries. You may see something close to what those who came before you saw and imagine another way of life.

Studying the past gives a rare chance to examine our place in time and forge links with the human continuum. Archeology is the only way we have to study peoples who

left no written records. Yet archeology faces many challenges in protecting and interpreting the past.

People have the opportunity to experience the past and to access information gained by archeological research. Sadly, however, that opportunity is disappearing. It is estimated that 80-85% of mounds and earthworks that were here in the early 1800s no longer exist. Most sites have been lost to farming, development and vandalism. Education and teachers can influence whether the students of today will know and experience America's rich cultural legacy as the adults of tomorrow.

How to use this Curriculum Guide

Imagine living 2000 years ago. What was life like for the peoples living then? What did they eat? What did they wear? How do we know today about these peoples we call the Hopewell?

The goal of this curriculum guide is to help fourth through sixth grade teachers answer these questions by providing hands-on lesson plans for use in the classroom and at the park. Information on the Hopewell culture and archeology are provided here, as well as information on scheduling field trips and sources for references and resources.

To use this guide, read the background information on the Hopewell culture and archeology. This material will provide you with the information needed to conduct the activities.

After the teacher introductory materials, on pages 25-28 you will find introductory material for students entitled "The Life and Times of the Hopewell Peoples." These pages may be removed and copied for classroom use.

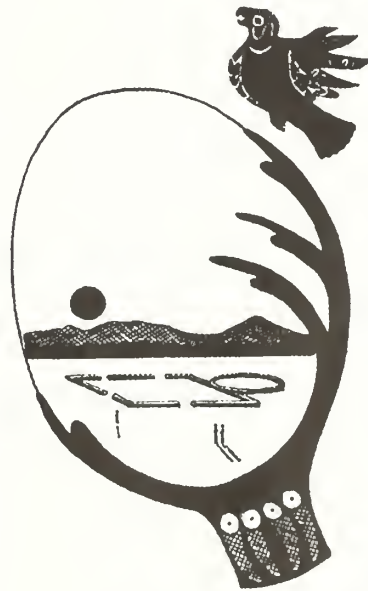
Following the section on background information, you will find the classroom activities. Activities are grouped broadly by type: Introductory material (with vocabulary), writing, archeology, culture, experiential activities and art, map skills, and resource protection. Most activities and support materials are one page (front and back). Some activities include blackline masters. These may be copied to make worksheets or transparencies.

Each activity has sections on objectives, materials needed, method, background, procedures and evaluation. At the top of each activity is listed the subject, duration, location, strand and learner outcomes as related to the Ohio Proficiency Test. "Location" indicates whether the activity may be done before, after

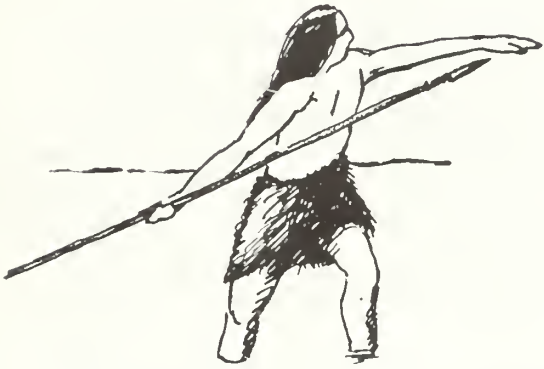
or during a visit to Hopewell Culture National Historical Park. On-site indicates the activity is done at the park. A ranger may be available to assist with on-site activities. Teachers are encouraged to schedule at least one on-site activity for their class. Teachers unable to visit the park may adapt the activities to a Hopewell site closer to their school.

Following the activities section is a references and resources section. These references are primarily for teacher use. Those appropriate for student use are marked with an asterisk (*). You will find listings of additional prehistoric archeological sites and resources. Also included is an index by subject and learner outcomes for the activities.

This curriculum guide will help students appreciate Ohio's rich prehistory by answering the questions listed above. This guide was made possible by grants from the National Park Foundation and the Mead Fine Paper Division. Many thanks to both of these organizations for their commitment to the National Parks and to "parks as classrooms."



The People Who Came Before



Thousands of years before the Europeans arrived in the Western Hemisphere, other peoples were living throughout North America. During thousands of years of human occupation, peoples prospered, struggled, and endured. The legacy these people left on the landscape reminds us that we follow in a long line of human occupation.

The first humans may have arrived in what is now southern Ohio as early as 11,500 years ago. These first peoples followed game such as mastodon and giant elk.

Archeologists call these people paleo-Indians.

As the centuries passed, cultures in eastern North America changed and evolved. Approximately 2200 to 1500 years ago, the culture we call the Hopewell became the major influence in the eastern woodlands in the Ohio River drainage and along the upper Mississippi drainage. The Hopewell peoples thrived for over 700 years until they too changed and evolved.

The Hopewell left no written records; their legacy was written on the land in the form of mounds, geometric earthworks and earthen walls scattered throughout the Ohio River valley and its tributaries.

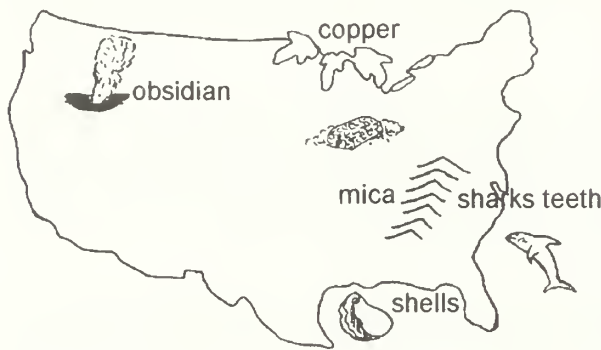
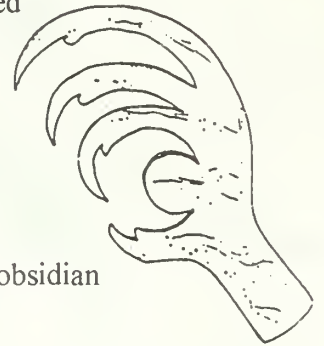
The Hopewell were not the first nor the last moundbuilding culture in North America. Before the Hopewell, the Adena culture (3000-2000 years ago) built mounds. Many years after the Hopewell, peoples we call the Fort Ancient culture (1000-400 years ago) were constructing earthworks. Although the Adena, Fort Ancient and other Native American cultures constructed mounds and earthworks, the Hopewell were unique.

Unlike the Adena, whose earthworks tended to be isolated conical mounds, the Hopewell built elaborate earthen walls, often in geometric shapes and sometimes enclosing over 100 acres. These enclosures usually (but not always) contained mounds. Some enclosures were very large, such as the Hopewell Mound Group, which was 140 acres in size and contained several large mounds.

Evidence of Hopewell influence can be found from Kansas City to New York, from Florida to the Great Lakes. Yet the classic Hopewell culture sites were centered at five major locations, all found in the present state of Ohio. One center was on both sides of the Ohio River at Portsmouth. Today only a small fraction of that complex of earthworks still remains. Another center was in the present city of Newark, in Licking County, just east of Columbus. There the Hopewell constructed several large geometric figures and connected them with miles of parallel embankments. Other centers were along the Miami River in southwest Ohio and at the mouth of the Muskingum River near Marietta in southeast Ohio.

Several enclosures were built at each moundbuilding center. But the largest center was in the Scioto River valley around Chillicothe in Ross County. Here the Hopewell constructed some two dozen enclosures in the shapes of squares, circles and octagons.

Some Hopewell earthworks, such as the Mound City Group, were used in part for burial, and probably for other social, political and ceremonial purposes as well. Some earthworks may have even had astronomical purposes. Fort Ancient, Newark and other sites have lunar alignments that may have been significant to the Hopewell. We know they had a complex social and ceremonial life. Evidence of this comes from the number, size, and locations of their elaborate earthworks, and from the finely crafted artifacts they left behind. Artifacts of copper, mica, shells, bear teeth, and obsidian have been found buried under the mounds.



The variety of materials from which the artifacts were made indicate the Hopewell people maintained an extensive network that brought raw materials from hundreds of miles away. Using rivers and trails for transportation, copper from the southern shore of Lake Superior, silver from east-central Canada, obsidian from what is now Yellowstone National Park in western Wyoming, mica from the Blue Ridge Mountains of North Carolina and Tennessee, and shells from

the Gulf of Mexico were brought into south central Ohio. These raw materials were fashioned into the shapes of birds, mammals, reptiles, human figures, and dozens of other forms.

The mounds seen today began as locations used for ritual, ceremony or feasting. Over time, some of these locations were roofed over and used as public buildings. In some instances, people were buried in these public buildings, although not everyone merited burial in these special locations. Perhaps only the more important people among the Hopewell were buried there. Individuals buried under the mounds were both young and old, both women and men. Usually the dead were buried in a charnel house, a ritual or ceremonial structure built for special purposes. After the funeral ceremony, individuals were interred in many ways. Some were buried in pits dug in the charnel house floor. Others were placed on low clay platforms or even in prepared clay basins. Many bodies were cremated, while others were laid out. Eventually these special buildings were burned or dismantled and covered over with the mounds we see today. (See Support Materials: "A Look Beneath the Mounds.")

The earthworks themselves testify to an organized and stable society, one capable of undertaking construction projects on a monumental scale. Using little more than clam shells, wooden digging sticks, stone hoes and baskets, the Hopewell constructed their earthworks. They erected miles of embankments and moved thousands of tons of soil. Some of these sites still remain today. A few, such as Mound City, Seip Mound, Fort Ancient State Memorial, Fort Hill State Memorial and Mound Builders State Memorial, are preserved in parks and are open to the public.

Daily Life

What was life like for peoples of the Hopewell culture? Archeologists are just beginning to learn what daily life might have been like in a Hopewell village. Effigy carvings give some idea of Hopewell dress and appearance. Both women and men wore wrap around skirts. Men also wore a type of breechcloth. In colder weather additional clothing of skins and furs were added. From the imprints and remnants left on copper artifacts, archeologists have found evidence of woven fabric. Not only is the weaving of the fabric highly developed and complex, but the thread used was extremely fine, in some cases as fine as fabrics available today.



The effigy carvings reveal a variety of hairstyles. Women wore their hair high on the head, with a bun toward the forehead, or pulled back into a single ponytail. Men wore a bun or two near the forehead or had areas of their head shaved.

Hopewell homes were usually oval, bent-pole structures, approximately 10 feet by 12 feet, probably covered with bark or skins. Archeologists believe these houses were usually occupied by an extended family. "Villages" were probably small and located near water sources, and may have consisted of three or four extended families living together. The Hopewell peoples were less nomadic than peoples before them, settling in the river valleys and drainages where they could better exploit the food sources available then. The Hopewell probably did not live among the earthworks or mounds, but gathered at the earthworks for social and ceremonial events.

Daily life in a Hopewell settlement was probably similar to life in any early farming community. Men and women worked in the gardens and fields, hunted and gathered in the forest and fished in the rivers. Children, no doubt, played and fought with their siblings and friends and complained about doing chores.

According to some archeologists, the Hopewell were among the first people in North America to make a commitment to agriculture. Unlike later groups, they did not rely on corn or beans. From studying their middens, or trash piles, archeologists have learned that these people relied heavily on a variety of starchy and oily seed-bearing plants. Hopewellian people cleared, planted, cultivated, and harvested fields of goosefoot (related to lamb's quarters), knotweed, maygrass, sumpweed, little barley, sunflower, and squash.



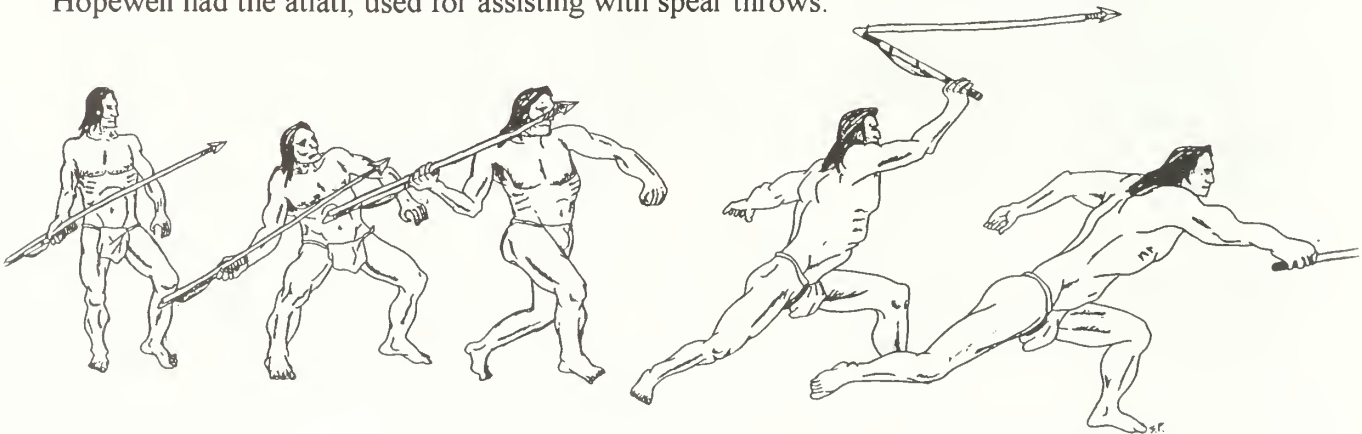
The Hopewell apparently did not extensively cultivate corn. They may have cultivated some corn, but perhaps more for ceremonial use than eating. Corn as a staple crop came later. By the time of the Fort Ancient culture, about 1000 years ago, it had become the primary source of

starch for native peoples. The Hopewell obtained their starches from a much wider variety of plants. (See Support materials: "Supertime: 2000 years ago.")

The Ohio Hopewell lived in a unique environmental region. The Hopewell environment was a different environment, populated with bison, elk, bear, wolf, ivory-billed woodpeckers, passenger pigeons, southern pearlwort, and American chestnut, all of which are extinct or no longer found extensively in this state. Known as a zone of transition, central Ohio was the edge zone between the solid forests of the north, east and south and the prairie to the west. This combination of forest, prairie and rivers provided an abundant supply of food. From their middens it is evident that the Hopewell gathered raspberries, pawpaw, hickory nuts, chestnuts, walnuts, acorns, goosefoot, knotweed and fresh water mussels. They also hunted deer, elk, black bear, ducks, turkey and beaver. In addition to hunting, the Hopewell peoples supplemented their diets by snaring and trapping small animals such as rabbit and raccoon. From some of the materials they left behind, archeologists have been able to recreate nets used in fishing. This abundant food supply allowed the Hopewell to devote more time to other activities that became the characteristic traits of their culture, such as constructing mounds.

The Hopewell may have developed a complex social order. There may have been individuals in this society who specialized in such skills such as pipemaking, copper crafting, and engineering. There is no evidence of a hereditary hierarchy, but the Hopewell peoples probably had a complex social order that enabled them to create monumental earthworks and leave beautiful artifacts.

One surprising note about the Hopewell peoples is that they did not have bows and arrows. Although the bow was probably in use for other purposes, like drills and fire-drills (for making fire), the technology had not been applied yet to projectile points. The points used by the Hopewell were for darts, spears and knives. Although they did not have the bow and arrows, the Hopewell had the atlatl, used for assisting with spear throws.



Their points, blades and bladelets were very effective. Some obsidian bladelets of the Hopewell are sharper than their modern counterparts of surgical steel.

Most of what we know or believe about the Hopewell comes from archeology, the study of physical remains left by past societies. We can also gain insight into these prehistoric cultures through the historical and contemporary perspectives of Native Americans. Hopewell Culture National Historical Park works with peoples historically associated with this area, such as the Shawnee, Miami and others.

Hopewell Archeology

A thousand years before Columbus landed in the Western Hemisphere, the Hopewell ceased constructing elaborate earthworks. Most likely, the peoples remained in the area. Only the culture changed and mounds and earthworks were no longer built. Later groups, such as the Fort Ancient, forged their own mound-building traditions.

Other peoples moved into the region as time passed. By the time the Europeans began arriving in the 1700s this area was occupied by groups such as the Delaware, Miami and Shawnee. When these groups were questioned by European missionaries and settlers about the mounds, they could only reply that they were constructed by the ancient ones. The Delaware had a legend about the mound builders being an ancient race. The Shawnee simply referred to the mound builders as the "Old Ones." By the late 1700s all that remained of the Hopewell culture were enigmatic tree-covered mounds and earthworks, whose origin were a matter of speculation by the European settlers.

Mound City Group was soon recognized as unique among Hopewell sites. Most Hopewell enclosures have 20 or 30 acres of land inside the walls. At Mound City there are only 13 acres inside the wall. Most Hopewell enclosures have walls up to fifteen feet high with numerous openings or entrances. Mound City has a wall only three to four feet in height with only two entrances. Most Hopewell enclosures have few mounds inside the walls; at Mound City there are at least twenty three mounds inside the enclosure.

Because of these differences and others, Mound City Group was the focus of attention early in the 1800s. The mounds and earthworks on the site were first mapped and measured in 1846 by Ephraim George Squier, editor of the Scioto Gazette, and Dr. Edwin H. Davis, a Chillicothe physician. Their work was published in 1848 as the first of the Smithsonian Institution's *Contributions to Knowledge: Ancient Monuments of the Mississippi Valley*. These two men carefully mapped and measured dozens of mounds and earthwork sites in central Ohio. Of Mound City they said:

"The enclosure, designated, from the great number of mounds within its walls, "Mound City", is in many respects the most remarkable in the Scioto Valley. In outline it is nearly square, with rounded angles, and consists of a simple embankment, between three and four feet high, unaccompanied by a ditch. The first and most striking feature in connection with this work is the unusual number of mounds which it contains. There are no less than twenty-four within its walls. All of these... have been excavated..." (1848:54).

The nineteenth century was a period of wild speculation concerning the antiquity and origin of the mounds of North America. The belief developed that mounds in Ohio and other places were the work of a vanished race or civilization of Mound Builders, who may have been an Old World civilization such as the Phoenicians, Israelites, or Romans. Attempts to prove or disprove these theories led to the birth of the science of archeology in North America in the nineteenth century. Squier and Davis were among these pioneering archeologists, and although they were wrong in concluding that the mounds had been built by a group distinct from the American Indian,

they did carefully record basic measurements and other data. Often their work is the only surviving record of some earthworks.

In 1894, Cyrus Thomas of the U.S. Government Bureau of Ethnology's Division of Mound Exploration, published his report of twelve years of intensive archeological research. Comparisons between "Mound Builder" artifacts and customs and those of historic Indian tribes showed conclusively that the mounds were built by ancestors of living American Indians.

In 1846, when Squier and Davis produced their map, the Mound City Group earthworks were preserved in a farmer's wood lot. Except for the removal of trees, the mounds were relatively undisturbed. Sometime during the 1850s the wood lot was cut, the land cleared and placed into cultivation. For the next seventy years farmers plowed the mounds, gradually leveling and destroying portions of them.

Farming continued until 1917 when the United States government purchased the land. The land was used as part of Camp Sherman, a World War I Army training camp. The camp consisted of some 2,000 buildings and trained almost 35,000 troops at a time. Within the thirteen acre enclosure at Mound City, the Army constructed almost fifty buildings, a number of roads and a railroad spur.

Despite all of this activity, the mounds were not completely leveled. Portions remained undisturbed and a great deal of information could still be learned from the site. As the buildings of Camp Sherman were being torn down William C. Mills and Henry Clyde Shetrone began a series of excavations at Mound City. Conducted by the forerunner of today's Ohio Historical Society, the excavations took place between 1920 and 1922.

Through these excavations and work at other sites, Mills and Shetrone isolated and described many of the traits that characterized the Hopewell. They found a wealth of objects suggesting an extensive "trade" network and illustrating the fine workmanship of Hopewell craftspeople. They described this "trade" network used by this culture and suggested the religious or ceremonial character of the Mound City Group.

In all, Mills and Shetrone excavated portions of 12 mounds at Mound City. The remaining mounds, usually the smaller ones, could not be relocated on the surface. Using their own research and measurements recorded by Squier and Davis, Mills and Shetrone began the process of restoring the mounds to their original appearance. Mills also documented that the mounds were built over the remains of burned or dismantled house-like structures that had served as repositories for the dead and as sites for rituals and ceremonies. These structures were called charnel houses.

One unforeseen result of Mills' work at Mound City was the definition of the Intrusive Mound culture. Squier and Davis had alluded to intrusive uncremated burials, yet their documentation was less than convincing. Given the extent of previous disturbances to the site, Mills held little hope of shedding any light on this subject. As it turned out, he uncovered the remains of 13 intrusive burials that had been placed in a mound by a later Native American culture. From the artifacts associated with these burials archeologists have been able to assemble complete tool-

making kits used by specific individuals for the manufacture of artifacts, perhaps including some of the other objects placed with the intrusive burials. We now know that this culture, who used the mounds built by the Hopewell, dates close to 1100 years ago.

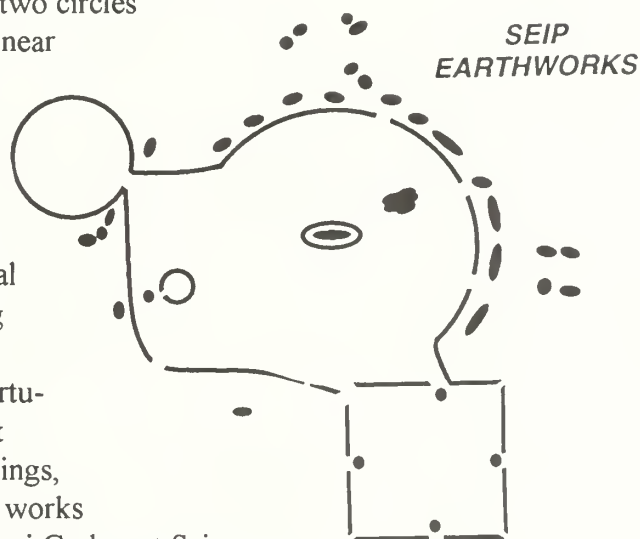
HOPEWELL MOUND GROUP



The name Hopewell comes from the excavation of a site located west of Chillicothe. This mound enclosure surrounds over 110 acres and contained a great quantity of quality artifacts. At one time, this enclosure may have featured as many as forty mounds. The site, located on land owned by Mordecai Hopewell, was

excavated by Warren K. Moorehead in 1891-1892. The site, which had been named the North Fork Works, had first been mapped by Caleb Atwater in 1820 and later explored by Squier and Davis. Yet it was not until Moorehead's excavation through the fall and winter of 1891-1892 that the remarkable quantity and quality of artifacts were discovered.

Archeologists have studied other sites throughout the Scioto watershed, including the Seip Earthworks, a complex composed of two circles and a square, enclosing some 120 acres. Inside this site near Bainbridge are a number of small mounds, three large conjoined mounds and a large loaf-shaped mound. This site was first documented by Caleb Atwater in the 1820s, then mapped again by Squier and Davis. It was excavated in part by William C. Mills and later by Clyde Shetrone in the early 1900s. In 1966, the Ohio Historical Society began a series of excavations at the site. During these excavations a number of structures were studied; structures which were not associated with burials or mortuary activities. Rather, these structures appear to suggest locations of specialized activities. These were not dwellings, but may have served more as "workshops" to create the works of copper, mica and obsidian. In addition, studies by N'omi Greber at Seip have revealed a social differentiation within Hopewell society, perhaps analogous to clans or lineages.



In 1923, to recognize the significance of the Mound City site and its potential for additional knowledge, President Harding signed the proclamation establishing Mound City Group National Monument. The proclamation establishing the area stated that

"... 'Mound City Group' of prehistoric mounds...is an object of great historic and scientific interest and should be permanently preserved and protected from all depredations and from all changes that will to any extent mar or jeopardize their historic value..."
(Proclamation No. 1633).

Since the days of Mills and Shetrone, both the research and the restoration work have continued. The National Park Service continued the work of Mills and Shetrone through a series of excavations to further define the Hopewell culture and to provide details on specific mounds as well as artifacts for exhibition to the public. Many of the projects were done under contract with the Ohio Historical Society. One of the people associated with these projects was Raymond S. Baby. He documented the existence of charnel houses - the structures thought to be used for ceremonial and other purposes - beneath many of the mounds. Baby also documented the existence of items thought to be associated with the burial ceremony.

Yet with all the research done over the years, many questions remain unanswered. Additional research is needed to provide a broader understanding of the Hopewell way of life, and the reasons for the creation of such elaborate earthen structures. In an attempt to provide some of the answers and to preserve a wider sample of Hopewell sites, the National Park Service was authorized in 1980 to acquire the Hopeton site on the east bank of the Scioto River.

Of the many enclosures that were once in the Scioto valley, the Hopeton site is one of the best preserved. This site contains a full range of ritual, burial and occupation sites from 4500 to 400 years ago. The Hopeton Earthworks may yield information on the process of cultural change for the prehistoric Ohio cultures. While this site was first documented in 1809, it received little professional attention until 1976, when it was studied by David Brose.



**HOPETON
EARTHWORKS**

The Hopeton Earthworks were acquired by Mound City Group National Monument in 1990. Preserved on the 150 acre site are the remnants of a large square enclosure as well as a large circular earthwork and two long parallel walls stretching across the terrace for almost half a mile. Like most of the sites in the Scioto River valley, Hopeton was mapped and measured by Squier and Davis in 1845.

In 1992 legislation signed by President George Bush authorized the National Park Service to acquire the Hopewell Mound Group west of Chillicothe, the High Bank Works south of Chillicothe and Seip Earthworks near Bainbridge, all in Ross County. The legislation also authorized an increase in the acreage at the Hopeton site to include village and camp sites associated with the earthworks. In addition, the legislation changed the name of the park from Mound City Group National Monument to Hopewell Culture National Historical Park.

Today Hopewell Culture National Historical Park represents our commitment to the preservation of our rich and diverse cultural heritage. Tomorrow, Hopewell Culture National Historical Park may provide a clearer understanding of the people who labored in central Ohio to construct monuments out of earth some 2,000 years ago.

The Study of Archeology

Archeology is defined as the scientific study of the life and culture of past peoples through the excavation and examination of their cities, relics and artifacts. It is not some swashbuckling explorer grabbing the treasure in a temple. Archeology provides a link to the past and a means to study the people who came before us. There is a natural human curiosity about the past. As humans we want to know more about those who came before; we want to understand them as people and fellow human beings. The National Park Service is actively engaged in archeological studies. Most units of the National Park Service contain prehistoric and/or historic archeological remains.

Archeological sites are the physical remains of the past that can be studied by archeologists to answer questions about history and prehistory. Archeological sites may be building remains, trash heaps, habitation sites or ceremonial sites. These physical remains are often buried by natural processes or by subsequent human activity and must be studied carefully and systematically through excavation and other techniques.

Archeological sites are especially important to the preservation and understanding of our nation's heritage because they are the main source of knowledge about the prehistoric past. More recent archeological sites can provide information on aspects of history that were never written down, even though they occurred at a time when written records were kept.

All archeological sites are fragile and irreplaceable; they cannot be rebuilt or remade. Even the most current archeological excavation is a destructive process, so archeologists are very careful to excavate only what they need. Archeologists frequently concentrate their work on sites that may soon be lost, such as highway or building construction sites.

Through systematic excavation archeologists can unearth clues to a culture's past. When artifacts are discovered, their location or provenience is carefully documented and recorded. Later, when analyzing all the field data, the artifacts and their context provide the archeologist with a glimpse into the story of the peoples who came before.

Excavation is not the only tool the archeologist uses. Archeologists rely on ethnographic studies, or studies of more contemporary peoples and their cultural changes through time. Archeologists rely heavily on old-fashioned research through historical records and new technology such as ground penetrating radar. They also study plants in the field of ethnobotany and astronomy with archaeoastronomy. They are not only excavators: they are also observers, writers, and analysts.

The National Park Service administers 375 units, many of which have prehistoric and historic archeological remains. These include prehistoric sites such as Hopewell Culture National Historical Park, historic sites such as Fort Frederica, and presidential homes such as Abraham Lincoln Birthplace.

As early as 1906, the American Antiquities Act provided protection for the antiquities of the

United States. In 1979, the Archeological Resources Protection Act was signed into law, stating in part:

On lands administered by the National Park Service, it is unlawful to excavate, remove, disturb, deface, or destroy any historic or prehistoric building, structure, ruin, site or in-place exhibit, artifact or object, or to collect, appropriate, excavate, damage, disturb or destroy artifacts, pictographs, petroglyphs, objects of antiquity, fossils or scientific specimens.

Violators of these laws are subject to arrest. Conviction can carry criminal penalties of up to one year in prison and/or \$10,000.

In 1990, the Native American Graves Protection and Repatriation Act (NAGPRA) was signed into law. In response to this law, the National Park Service has completed summaries and inventories of Native American human remains and ceremonial and cultural items in its collections and notified the associated tribe or groups. In addition, the National Park Service is consulting with the associated tribes regarding planned excavations and accidental discoveries. Native American human remains and cultural items can be repatriated to the culturally affiliated tribe or organization on request.

Although several activities in this guide provide some of the basic understanding of archeological excavation, collecting artifacts from the surface or digging on your own is not a constructive way to participate in archeology. Unauthorized collecting or digging for artifacts is illegal on Federal land and on private land without permission. More importantly, excavating without the proper training and professional support destroys potentially important archeological information about the context in which artifacts and structures are found.

National Park Service



To conserve the scenery and the natural and historic objects and the wildlife therein, and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.

Organic Act of 1916

In 1916 Congress authorized the establishment of the National Park Service to preserve and protect our national landmarks. Although this act of Congress, called the Organic Act of 1916, established the National Park Service, it did not establish national parks. National Parks had been in existence since 1872, when Yellowstone was established as the first national park in the world. Today the National Park system preserves some of our best landscapes, our natural and cultural heritage and prime recreational opportunities.

In 1997, the National Park Service contained 375 units of national significance that were created by Americans for Americans. National Parks "are landscapes and shrines, places of wonder and reverence, but they are more than places -- they have been and they are containers of (past) experience." (Former National Park Service Director Roger Kennedy) The National Park Service preserves historic sites such as Ellis Island and Independence Hall, and battlefields such as Gettysburg and Shiloh. In addition, the National Park Service protects significant archeological sites such as Chaco Canyon, Pipestone and Effigy Mounds and great natural landscapes such as Yellowstone, Glacier and the Everglades.

For over 200 years the United States has been protecting its great landscapes. Protecting the public domain is nothing new. Six of the thirteen colonies would not sign the Articles of Confederation unless land was held in the federal or public domain. One of our first presidents, Thomas Jefferson, warned that:

...If one link in nature's chain might be lost, another and another might be lost, till this whole system of things should vanish by piecemeal.

The National Park idea, the concept of large-scale preservation, was first espoused by George Catlin in 1832. This well-known artist wrote that natural areas might be preserved "by some great protecting policy of government...in a magnificent park...A nation's park...."

National monuments had already been set aside as early as 1790 with the National Capitol Parks. In the same year Catlin worried about western wildlands, Hot Springs Reserve (Arkansas) was set aside.

In 1889, Congress authorized the President to reserve Casa Grande Ruin, the first step towards federal protection of prehistoric sites. Twenty-seven years later, Congress enacted the Antiquities Act of 1906. The Antiquities Act was one of our first efforts at protecting the archeological resources found on public lands.

However the national parks had no systemic management and were vulnerable to misuse. Stephen Mather recognized this need and approached Interior Secretary Franklin Lane about the potential mismanagement of parks. Secretary Lane invited Mather to Washington, D.C. to correct the situation. Mather rose to the challenge and in 1916 the National Park Service was born. Mather and his associate Horace Albright served as the first director and associate director.

Establishment of the National Park Service paved the way for the annexation of other federally protected areas. In 1933, with the reorganization of the government, the National Park Service acquired the War Department's national monuments and national military parks, the Department of Agriculture's national monuments and the National Capitol Parks.

Through the years the National Park Service has strived to protect both natural and cultural resources. The Archeological Resources Protection Act of 1979 (ARPA) provided additional protection for archeological resources. ARPA prohibits unauthorized digging and collecting of archeological resources, including pottery, basketry, bottles, arrowheads, structures, rock art and human remains on Federal land. No person may sell or buy any archeological resource which was illegally acquired.

The United States may not have a Sistine Chapel or an Acropolis, but we do have ancient shrines and natural shrines, many of which are protected by law. It is the job of the National Park Service to protect those sites so that the American people may have "places to play in and places to pray in." (Naturalist John Muir)

Mound City Group National Monument was established in 1923 to protect significant archeological remains of the Hopewell culture. For twenty years it was managed by the Ohio Historical Society until 1943, when it was turned over to the National Park Service. In 1992 the name was changed to reflect the addition of other sites and the broadening emphasis on other aspects of the culture.

National Parks like Hopewell Culture National Historical Park "affirm the importance of the real, the tangible, the continuous and...those experiences we have in common." (Roger Kennedy)

The Life and Times of the Hopewell People: Introduction for Students*

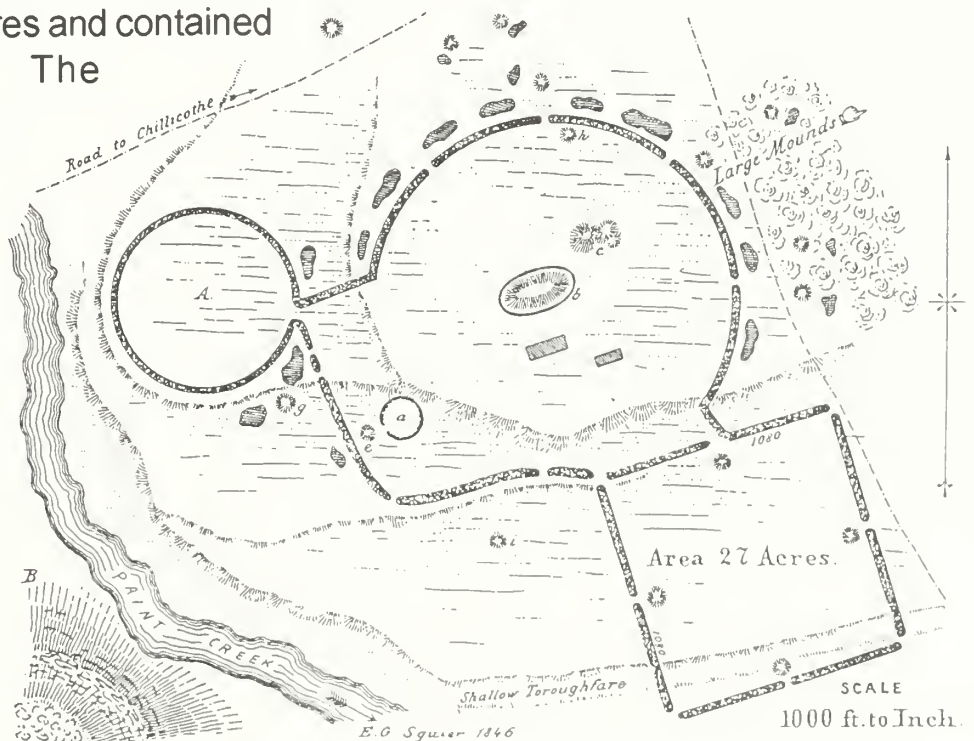
Who were the Hopewell people and where did they live?

Over 2,000 years ago the Hopewell peoples thrived in the Eastern United States, in an area from the Great Lakes south to Florida, and from New York west to the Great Plains of Kansas. The record of their life was not left by words on paper. They "wrote" on the land by building mounds and earthworks (walls of earth).

The Ohio Hopewell are known for building earth walls around their mounds. Usually the earth walls enclosed several acres and contained many mounds. The mound building centers for the Hopewell people in Ohio are found near the present cities of Portsmouth, Newark, and Chillicothe.

Hopewell earthworks were constructed for reasons we do not fully understand, although they were probably sites

where ceremonies and other gatherings took place. By observing what they left behind, we believe the Hopewell had a stable and structured life. Their earthworks required a lot of work and organization by many people. The builders used clam shells, wooden digging sticks, stone hoes, and baskets to construct mounds and earthworks. They built miles of walls around the mounds by moving tons of earth. The walls were often built as squares, circles, octagons and other geometric shapes, demonstrating that the Hopewell had both math and engineering skills.



ANCIENT MONUMENTS of THE MISSISSIPPI VALLEY by E. G. SQUIER, A. M. and E. H. DAVIS, M. D. - 1848

Seip earthworks, near Bainbridge, Ohio

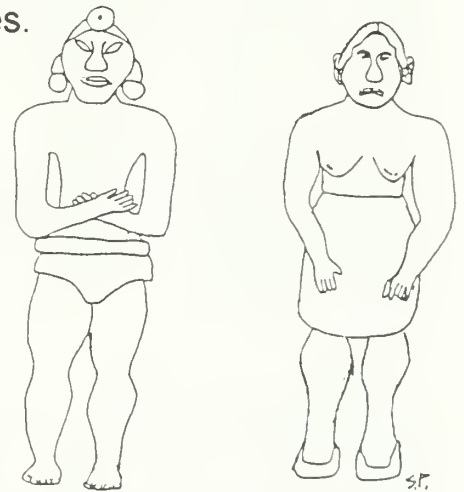
The Big 3: Food, Clothing and Shelter For students

Archeologists are scientists who study how people lived in the past. By excavating mounds and other sites and studying artifacts (objects made by the people) found at the site, archeologists learn about the daily life of Hopewell people.

Food: Ohio was a great place to live because it was both forest and prairie. Having a variety of plants and animals made it easier to find food. People did not have to spend as much time looking for food. However, their diet was a little different than yours and mine. Hopewell men and women were both hunters and farmers. They grew some food and gathered other foods. Their middens (or trash piles) have shown us they ate raspberries, paw paw, chestnuts, walnuts, acorns, goosefoot, and knotweed. In the forests, they hunted deer, elk, bear, and raccoon. (They did not have bows and arrows. Spears, traps, snares and nets were used for hunting). They built their homes near rivers where they fished and gathered mussels.



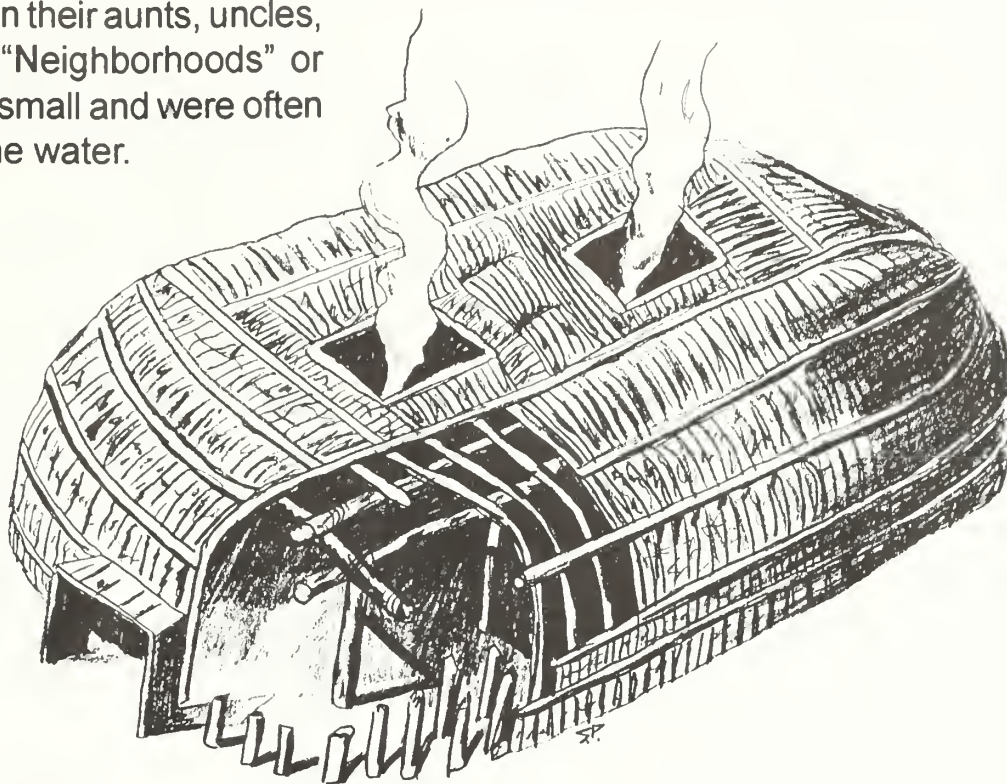
The Hopewell peoples may have been the first serious farmers in North America. They cleared, planted, and harvested fields of goosefoot, knotweed, maygrass, sumpweed, sunflower, squash, and little barley. Some of these plants, like maygrass and chenopodium, were starch and were eaten like we eat beans and potatoes. They did not grow much corn, and what little they did grow was probably saved for special times and ceremonies.



Clothing: There were similarities as well as differences in men's and women's clothing. Both wore wrap-around type skirts, but men also wore breechcloths.

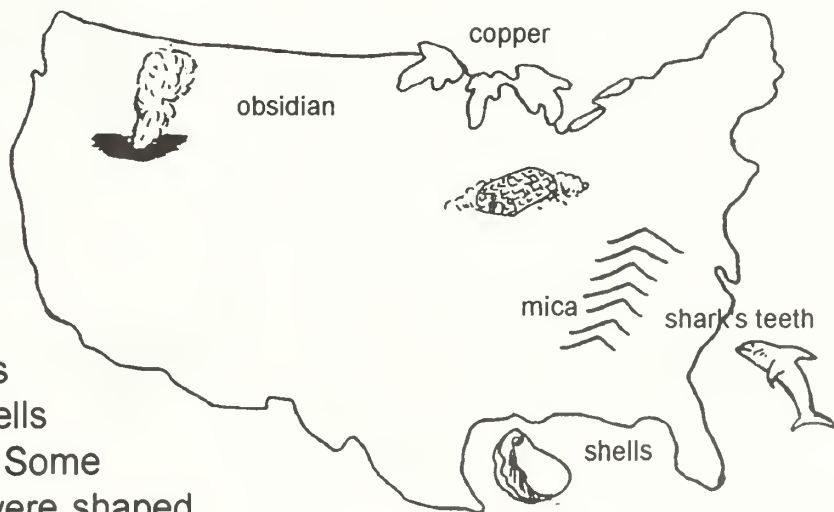
Hairstyles were probably important to them, just like they are to us. Women wore their hair high on their head, with a bun toward their forehead or pulled back in a ponytail. Men also wore their hair in a bun near their forehead, or two buns, or shaved like a Mohawk.

Shelter: Hopewell homes were usually oval, formed by bent poles, and covered with bark, sticks, or skins. A typical size was 10' by 20'. Usually relatives lived together, that is, a mother and dad, their children, grandparents, and maybe even their aunts, uncles, and cousins. "Neighborhoods" or "villages" were small and were often located near the water.



Transportation:

Rivers and foot trails were the roads of the Hopewell. We know they traded and travelled extensively because their mounds covered materials from far away. Copper came from Lake Superior, silver from Canada, obsidian from Wyoming, mica from the mountains in North Carolina, and shells from the Gulf of Mexico. Some of these raw materials were shaped into items that were placed in the areas where mounds would later be built.



Archeology For Students

Ephraim G. Squier, editor of the *Scioto Gazette*, the first newspaper in Ohio, and Edwin Davis, a doctor in Chillicothe, first studied, mapped, and measured the mounds in 1846. They recorded basic facts about the earthworks and are the “fathers” of archeology at that time.

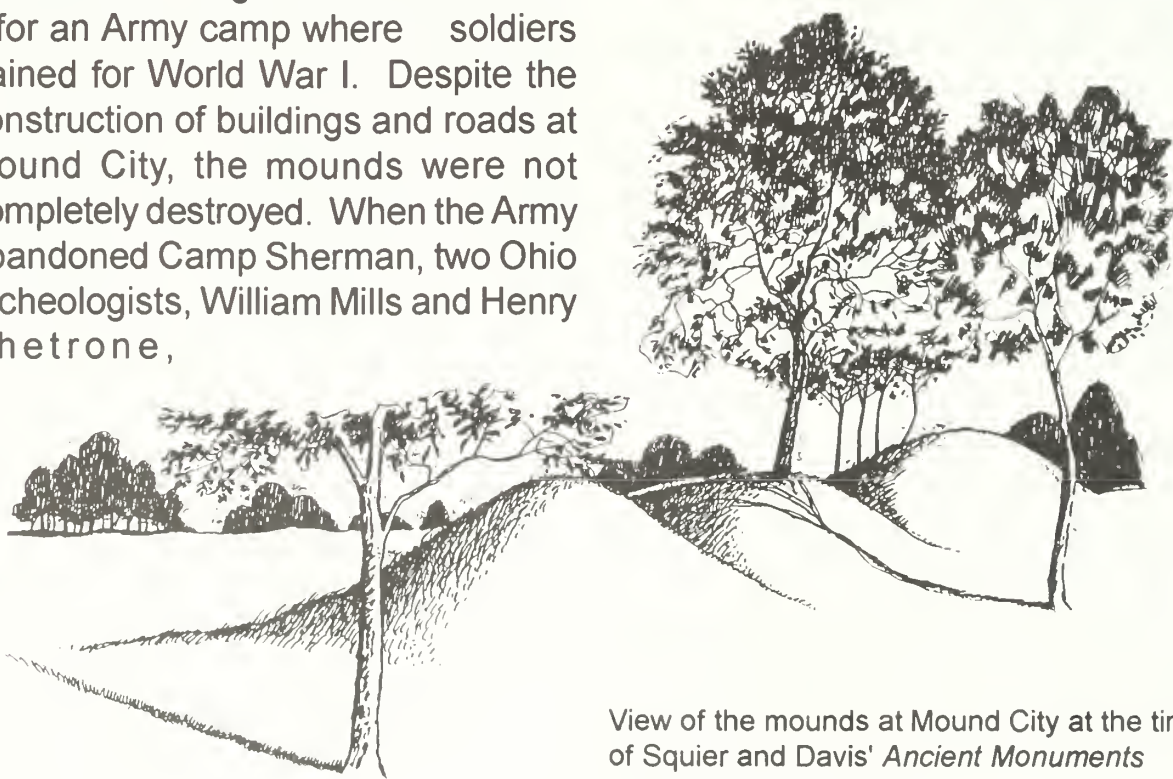
Before 1846 the mounds and earthworks at Mound City were in a farmer’s wood lot. In the 1850s the wood lot was cut down and the land was cleared and planted for farming. For 70 years, farmers planted and plowed the mounds, gradually leveling and partially destroying them.

In 1917 the United States government bought the land and used it for an Army camp where soldiers trained for World War I. Despite the construction of buildings and roads at Mound City, the mounds were not completely destroyed. When the Army abandoned Camp Sherman, two Ohio archeologists, William Mills and Henry Shetrone,

began to excavate and study the mounds. Their work led to the rebuilding of Mound City by the Ohio Historical Society.

In 1923 President Warren G. Harding, an Ohioan, signed a proclamation establishing Mound City Group National Monument. This meant that Mound City was recognized as an important archeological site.

The name Hopewell is not an American Indian name. It comes from the excavation of a site located six miles west of Chillicothe on land owned by a man named Mordecai Hopewell.



View of the mounds at Mound City at the time of Squier and Davis' *Ancient Monuments of the Mississippi Valley*

Introduction to the Hopewell Culture

Subject: Writing
Time: 60 minutes
Location: Pre Site
Strands: Writing
Learner Outcomes: Fourth Grade: Writing
Sixth Grade: Writing



Objective: After reading "Life and Times of the Hopewell People", students will make and write a book about the Hopewell.

Method: After reading about the Hopewell peoples, have students make and write a book synthesizing what they have learned.

Background: "Life and Times of the Hopewell People"

Materials:
"Life and Times of the Hopewell People"
Scissors
Paper
Pencils

Suggested Procedure:
(For more folded paper ideas, look for books by Joan Irvine).

I. 8 PAGE MINI BOOK

supplies needed: 8 1/2" x 11" sheet of white paper, scissors, flat surface to work on

1. Lay the paper so that the 11" side is horizontal, then fold the paper in half from top to bottom.

8 1/2



2. Open the paper.



3. Fold in half the other way, bringing the right side over to meet the left side.



4. Fold in half again.



5. Unfold the last fold.



Cut to center.

6. Cut to the center.

7. Unfold the whole paper; the cut line is in the center of the paper.



8. Fold top half down; cut line is in the center top portion.



9. Push from edges to make a small folding book.



II. "ARMOIRE" BOOK

Supplies needed: 8 1/2" x 11" white paper, pencil, ruler, flat surface to work on

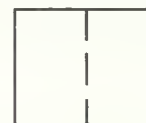
1. Lay the paper so that the 11" side is horizontal.



2. Using a pencil and ruler, measure and mark 2 3/4" from the left side; do the same from the right side. These will be fold lines, so if needed, draw pencil lines from the top to bottom.



3. Fold the left edge of the paper toward the middle until the dot forms the new edge line. Do the same for the right side. The book should look like an armoire, with double doors which open in the middle.



4. On the left front "door", students can make a word bank of terms about the Hopewell people/culture. On the right "door", they can write a short story about one facet of the Hopewell culture. When the "doors" are opened, the inside space can be used to draw a picture or mural to illustrate the student's story.

III. STRIP PANEL BOOK

Supplies needed: standard tagboard strip (36" x 3"), pencil, ruler, flat surface to work on

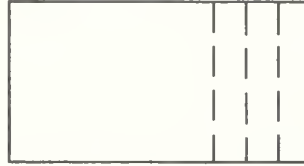
1. Using a pencil and ruler, measure 4 1/2" from the left end and mark it or draw line on the tag strip to show where it will be folded. Bend on this line, and crease the tag strip at this point. Continue to accordion fold the rest of the strip. When finished, there will be 8 panels. Students can write a sentence about the Hopewell peoples in each section and draw a picture to go along with it.



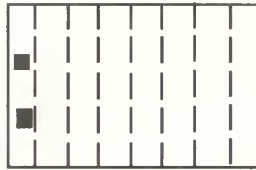
IV. FLIP CHART/STAGGER FOLD BOOK

Supplies needed: 4 sheets of 8 1/2" x 11" white paper, stapler, flat surface to work on

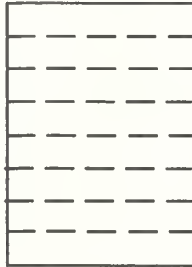
1. Lay 1 sheet of paper on the table with the 11" side horizontal. Lay the 2nd sheet on top of the first, but have the edge 1" from the end of the 1st sheet of paper. Lay the 3rd sheet on top of the 2nd sheet, but leave an inch between that edge and the 2nd edge. Do the same thing with the 4th sheet of paper.



2. Fold the end, where the edges are not staggered, over so that the 4 edges now exposed continue the 1" intervals.



3. When finished, the book will look like this. (This book can also be turned the other direction, so that the 8 1/2" side is across the top). Two staples in the top will hold the pages of the book in place.



Vocabulary

Adena: a prehistoric mound-building culture found in southern Ohio and other parts of the eastern United States, which flourished between 3000-2000 years ago

archeologist: one who studies archeology

archeology: scientific study of life and culture of past peoples through excavation and examination of their remains and the materials they left behind

artifact: any object made by human hands

burial: to place a deceased body into the earth or a tomb, usually in a ceremonial manner

ceremony: an established system of rites connected with an occasion as in religion or ritual

chapel house: a building where ceremonies were held and where human remains or artifacts were deposited

copper: soft, easily shaped reddish-brown metal

culture: behavior patterns, arts, beliefs, products of human work and thought typical of a group or population, usually passed down from older generation to next

Davis: Dr. Edwin Davis, co-author of “Ancient Monuments of the Mississippi Valley”, one of the first scientific explorers of the mounds

earthwall: an enclosure made of earth that surrounds a given area

effigy: representation of a person or animal

enclosure: a wall or fence that encloses or surrounds an area

excavate: to uncover or expose by digging

habitation site: any place where humans have lived, usually marked by cooking pits, trash pits, foundations, or post holes

Hopewell: name given to peoples who shared common beliefs and lifestyles and built mounds and earthworks throughout southern Ohio. Their influence reached throughout eastern continental North America between 2200-1500 years ago

flint: hard rock that breaks with a sharp cutting edge

Fort Ancient: a prehistoric culture found in eastern Indiana, Kentucky and West Virginia, as well as southern Ohio which flourished between 1000-500 years ago, after the Hopewell culture

mica: a group of minerals that crystallizes in thin, flexible, translucent, layers

middens: archeological term for trash pits or garbage dumps

mound: a heap or bank of earth, usually over a ceremonial structure or burial

obsidian: a hard, usually dark colored or black volcanic glass used to make sharp stone tools such as knives

pipe: a tube with a small bowl at one end for smoking plant substances

pipestone: hard claylike stone used by prehistoric peoples to make pipes

prehistoric: period before recorded history

shells: hard coverings of some aquatic animals used by Native Americans for beads, tools and in burials

Scioto River: a river that flows through Southern Ohio and into the Ohio River

Squier: Ephraim Squier, co-author of “Ancient Monuments of the Mississippi Valley”, one of the first scientific explorers of the mounds

white-tailed deer: animal used by Native Americans for food, hides and tools; prefers mix of field and forest as habitat

What on earth am I?

Subject: Vocabulary
Time: 25 minutes
Location: Pre or Post site



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Objective: Students will demonstrate familiarity with vocabulary relating to Hopewell culture by participating in a game.

Method: By participating in a game students learn vocabulary relating to the Hopewell.

Background: See introductory chapter.

.....

Suggested procedure:

1. Students should be familiar with the terms of the vocabulary list.
2. On the back of each student tape a card with one vocabulary word on it. The card should be placed so that others can see it, but the student cannot.
3. Explain the rules to the students. Other students can see their card, but the wearer cannot. The wearer is permitted to ask each individual **one** question, which must be answered yes or no. For example, “Am I a person?” To the next person, “Am I a thing?” “Am I an animal?” “Am I food?” “Am I a deer?”
4. Once students figure out what they are, they may take their card and attach it to their front. At this point they can give hints to others who have not figured out what they are.
5. Keep going until everyone has determined who or what they are.

.....

Materials:
Vocabulary list
Cards with
vocabulary words
Masking tape
Open area where
students can move

Why is the past important?

Subject: History, Culture

Time: 30 minutes

Location: Pre or Post Site

Strands: Culture

Learner Outcomes: Fourth Grade: Citizenship #2, 16

Sixth Grade: Citizenship #3



- Objectives:**
- 1) Students will use a personal object to share the importance of their past and through discussion about the object connect with reasons why the human past is important.
 - 2) Students will be introduced to the study of archeological heritage and its importance.

Materials:
Personal objects
from home

Method: Students bring to class an object, photograph or drawing of an object that represents their past. Through discussion, students give reasons for the importance of the past.

Background: Sites and artifacts can be messengers from the past. If we know how to read their messages, material remains can tell us about the people who made, used and left them behind. Although the owners of the artifacts and the inhabitants of the sites may have lived hundreds or even thousands of years ago, they undoubtedly had many of the same needs and concerns, hopes and fears, joys and sorrows that we have today. Each culture, whether hundreds of years old or living next door, has its value.

The messengers from the past belong to everyone. Most people are curious about links to the past. Material remains and the context within which they are found provide clues to cultural continuity and possibly, a glimpse on their perspective. Without these material remains, a link to the past is lost, and the survival of a culture depends on maintaining the links from past to present to future.

The link to the past is provided through scientific analysis as well as through traditional values placed in archaeological sites and artifacts. For example, Adena State Memorial (the 1806 home of Governor Thomas Worthington) is valued because it provides a tangible link to the early history of Ohio. Examining this historic building also provides scientific information about the lives of the inhabitants. Examining sites used by the Hopewell and other prehistoric peoples provides scientific information about the prehistory of the region and provides a tangible link to their material culture. (See also introductory materials for students and teachers.)

Suggested Procedure:

1. This lesson helps students begin to discover why we study the past. Assign the students to bring a picture or object from home that tells about their family's past. They may also bring a drawing of the object.
2. Share background information.

3. Working in groups of 3 or 4, students should tell each other what the object conveys about their past.
4. In a class discussion, ask the following questions:
 - a. Is it important for you to know about your past? Why or why not?
 - b. Is it important to know about the human past? Why or why not?
 - c. Humans have lived in Ohio for at least 11,000 years. Is it important to know about their lives? Why or Why not?
5. Ask students "What can we learn from the past?" Have students list ideas. Some possible answers include: how humans lived in the past; how culture changes; why culture changes over time.

.....

Evaluation:

If your past is important to you, what statement can you make about the importance of the past in general? If your past is important to you, and the object you brought from home reminds you of your past, how would you feel if someone took that object?

Extension:

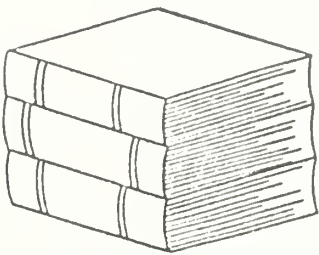
Have students exchange their object with a partner and hypothesize, without consulting the other, what that object means to each one. Have students then compare notes about their personal objects.

Discuss with students the value of other cultures, asking students why we should be sensitive to other people's culture.

This activity was adapted from an activity in "Intrigue of the Past: A Teacher's Activity Guide for Fourth through Seventh Grades". For more information on this activity guide, see the section entitled "Resources."

Look it Up!

Subject: Reference materials
Time: 25 minutes
Location: Pre or Post site
Strands: Reading
Learner Outcomes: Fourth Grade: Citizenship #2
Sixth Grade: Citizenship #2



Objective: 1)Students will learn how to differentiate between reference materials.
2)Students will become familiar with some of the terms relating to Archeology and Ohio prehistory.

Materials needed:
Copies of “Look it up!”

Method: Students complete the following sheets on different reference tools.

Procedure:

1. Discuss the definitions of the various reference tools listed on the activity sheet. Have students give examples of how each is used. For example, to learn what "stratigraphy" means, students would look up the word in a dictionary. To learn more about the Adena culture, students would look in an encyclopedia.
2. Have students complete the sheet on reference materials. Stress to students that the object is not to answer the question (yet!), but to learn how to find information on any topic.

Extension:

Students may want to look up some of the answers.

Alternatively, discuss computers and their role as reference tools.

Look it Up!

Each day people use many kinds of reference materials to find information. To find the telephone number of a friend, you would look in the telephone book. The telephone book is a **reference** source. If you want to know where a park is in the state of Ohio, you would look at a map of the state. The map shows where the park is located, what roads and towns are nearby, and even the county where the park is located. You might watch a program on television about shark's teeth and want to know where in the ocean sharks live. You could look in an **atlas** to find out. All these different sources make finding information easier.

Almanacs, atlases, dictionaries, encyclopedias and the Readers Guide to Periodical Literature are useful reference sources.

Almanac	published each year, lists up-to-date facts, figures, charts and records about different subjects
Atlas	a collection of maps and charts that provide information about a certain place's climate, population, geology, elevation, vegetation
Dictionary	gives correct spelling, pronunciation and meanings of words
Encyclopedia	a book or groups of books that have information arranged alphabetically on persons, places and things
Readers Guide to Periodical Literature	a group of books that can help you find magazine articles on subjects

Read the questions below and write the source in which you would find the information.

1. What is an artifact? Dictionary
2. What do we know about the Hopewell peoples? Encyclopedia
3. How does the climate in Mexico differ from Ohio's? Atlas
4. What percentage of the population in Ohio is Native American? Almanac
5. What is it like to live on an Indian reservation today? Readers Guide
6. What other mound building cultures were found in Ohio? Readers Guide or Encyclopedia
7. What are archeologists studying now? Readers Guide
8. What is preservation? Dictionary

Look it Up!

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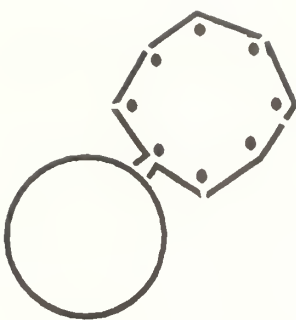
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4. What percentage of the population in Ohio is Native American? _____
5. What is it like to live on an Indian reservation today? _____
6. What other mound building cultures were found in Ohio? _____
7. What are archeologists studying now? _____
8. What is preservation? _____

Biography of a Mound

Subject: Writing
Time: 45 minutes
Location: Post site
Strands: Writing
Learner Outcomes: Fourth Grade Writing #a-d, h, i
Sixth Grade Writing: all



Objective: Students will exercise writing skills in writing the Biography of a Mound.

Method: The student will choose a mound and write a short biography.

Background: See introductory chapter: "People who Came Before" for teachers, copies of "The Life and Times of the Hopewell Peoples" for students.

Materials:
Copies of blackline master: Biography of a Mound

Suggested Procedure:

1. After visiting Mound City at Hopewell Culture National Historical Park (or after reading about the Hopewell in class) tell the students they will be writing a biography of a mound that they choose.
2. Distribute a copy of "Biography of a Mound" to each student. They will use the sheets to write a biography about their mound.
3. The student's biography has labelled sections (see blackline master) in order to help them organize their thoughts. Review each section with your students. Encourage the students to be both accurate and creative. They may describe what was actually found, or they may write about what **could** have been found in their mound.

4. DIRECTIONS FOR BLACKLINE MASTER - BIOGRAPHY OF A MOUND

- Identification - their name for the mound
- Birthplace - Mound City (or other site)
- Age - age of the mound
- Characteristics - what makes their mound different or unique, what the charnel house was like, or what activities took place there
- Artifacts-what was found under the mound, if anything
- Burials-what burials were under the mound (if any), who was it, what was it
- Builders-who built the mound, what does the student know about the people
- Why I Chose this Mound - why the student chose this mound
- Illustration - picture of their mound

If students choose an actual mound at Mound City, they may refer to the Hopewell Culture National Historical Park brochure for placement of the mound.

Evaluation: Have the students share their biographies with each other. Ask the students to discuss why they would build a mound. Ask each student why they chose their particular mound.

Extension: This activity may be used as a writer's workshop activity. This modification might include comparing this biography to other biographies, writing biography in "story" form, revising and sharing the biographies with classmates and others.

As an alternative, use a Hopewellian or Adena site near the school for this activity.

Biography of a Mound

Identification:

Birthplace:

Characteristics:

Artifacts found under the mound:

Burials found under the mound:

Builders of the mounds:

Why I chose to honor this mound:

Illustration of my Mound:

A large, empty rectangular box with rounded corners, intended for an illustration of a mound. The box is defined by a thin black border and occupies the central portion of the page below the text prompt.

Write of Passage

Subject: Writing

Time: Depends on activity chosen

Location: Post Site

Strands: Writing

Learning Outcomes: Fourth Grade: Writing, all

Sixth Grade: Writing

Objectives: 1) Students will create a written work in either a short or long mode (as defined in the Ohio Proficiency tests) on the Hopewell.

Method: Students will write in one of various forms on the Hopewell.

Background: See introductory chapter, "People Who Came Before" for teachers, copies of "The Life and Times of the Hopewell Peoples" for students.

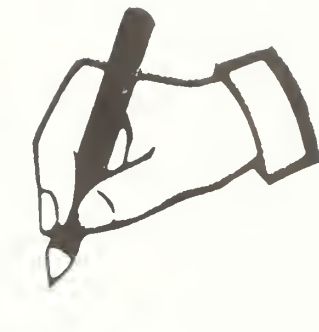
Suggested Procedure:

The following are suggestions for writing activities:

- *Have students write a letter to the editor of the paper explaining why it is important to save a fictitious mound.
- *Have students write a biography of a mound or the biography of an imagined Hopewell.
- *Have students write the story of a prehistoric American Indian travelling to the mounds.

Extension:

See also "Biography of a Mound."



Materials:

Pencil and paper

Comparative Timelines

Subject: History
Time: 15 minutes
Location: Pre or Post Site
Strands: Culture, Geography
Learner Outcomes: Fourth Grade: Citizenship
Sixth Grade: Citizenship

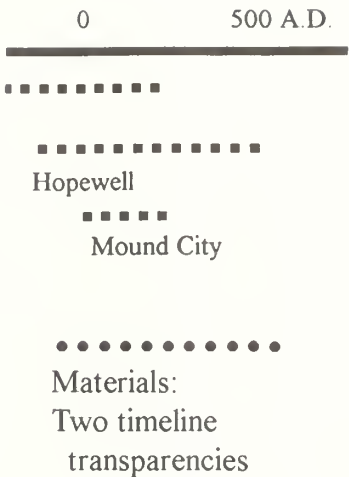
.....
Objective: Students will use a timeline to compare events throughout the world that were occurring while the Hopewell peoples were building their mounds 2000 years ago.

Method: Students compare timelines between the Hopewell period and other world events.

Background: See introductory chapter.

.....
Suggested Procedure:

1. Place the Hopewell transparency where all can see it. Ask the students if they know of any other events happening in the world during the time periods listed. List these events on the timeline on the transparency.
2. Place the second transparency over the first and have students compare events.



My Timeline

Subject: History, Archeology

Time: 45-60 minutes

Location: Pre or Post Site

1986

1997

- Objectives:**
- 1) Students will create a personal timeline.
 - 2) Students will examine stratigraphy in relation to timelines.
 - 3) Students will discover how stratigraphy is destroyed by human intervention.

Materials:
Copies of My Timeline
Scissors
Writing utensils

Method: Students compare cultures using a chart.

Background: The proper sequence of events must be known when trying to understand the past. Chronological order means that events are arranged in the order of occurrence, establishing a chronology. One way to display events visually in chronological order is with a timeline. A timeline is divided into equal time segments (month, year, century, for example), with one end representing the oldest events and the other end the most recent events.

Chronology is something we all use everyday. When someone tells us a story or when we watch a news report, it only makes sense if we can understand the story as it happened. Archeologists always try to establish the age of the sites, artifacts, or events they are studying so that they can place them in chronological order. Each piece of information contributes some understanding to the overall story of the past, but only if information can be placed in chronological order.

Archeological data are often buried. Sites become buried by the deposition of small-grained particles (sand, clay, silt) throughout the action of wind, gravity, and water. When archeologists dig a site, they record the location of what they find, so that chronological order can be established. Objects discovered at the bottom of pits dug by archeologists are the oldest, while those near the surface are the youngest. Stratigraphy is defined as the arrangement of information or events in layers, like layers of rock.

When vandals and artifact-seekers dig or loot a site, they remove objects which could determine the site's chronology, and therefore, the archeologist cannot learn the site's chronological placement. Vandals mix the stratigraphic layers together and archeological events cannot be placed in order. Digging a site is like mixing up the pages in a history book. Looting and removing artifacts from a site is like tearing up and throwing away a page of the past.

Everyone can help stop this problem by not digging in public sites or collecting artifacts from public land, by refusing to buy artifacts from people who dig and destroy sites, and by reporting people they see digging and collecting on land where they do not have permission.

This activity was adapted, with permission, from "Intrigue of the Past." See resource listing for bibliographic information.

Suggested Procedure:

1. Tell a story the students are familiar with out of sequence, leaving some parts out completely. Ask students what was wrong with the story. Ask "Why is it important to give information in order, including all its details?"
2. Tell the students they are going to be creating personal timelines. Pass out the timeline sheets. Students should list six events in their lives, beginning with the oldest event at the bottom and today at the top. Next to each event, students should draw something that represents that event.
3. After completing the list of six events, students should cut their timelines into six pieces separating the events along the dotted lines. Have students shuffle the six pieces.
4. Pair the students together and have the partners exchange their unordered timelines. Each student should try to place the other's timeline into its correct order without communicating with each other.
5. After five minutes, have students return the "reordered" timeline to its owner, with their best guess of the chronology. Be prepared for unpredictable results. Students reaction to someone else's perception of their timeline may result in some funny moments. Have students share with their partner the correct order of their timelines.
6. Discuss with the students "What happened when we jumbled the pieces? Was the other person able to reconstruct your time line without communication?"
7. Have students randomly remove two events from their personal timeline. Ask students if the timeline will be easier or more difficult now for others to reconstruct the order.
8. Connect this activity to archeological sites by pointing out how archeological information is usually impossible to place in order if the site has been dug by looters (scrambling or shuffling events) or if objects have been removed (removing strips.)
9. Explain stratigraphy as the arrangement of information or events in layers, such as layers of rock. Ask students what happens when the stratigraphy is jumbled. Explain vandalism as a jumbling of the pieces.

**Evaluation:**

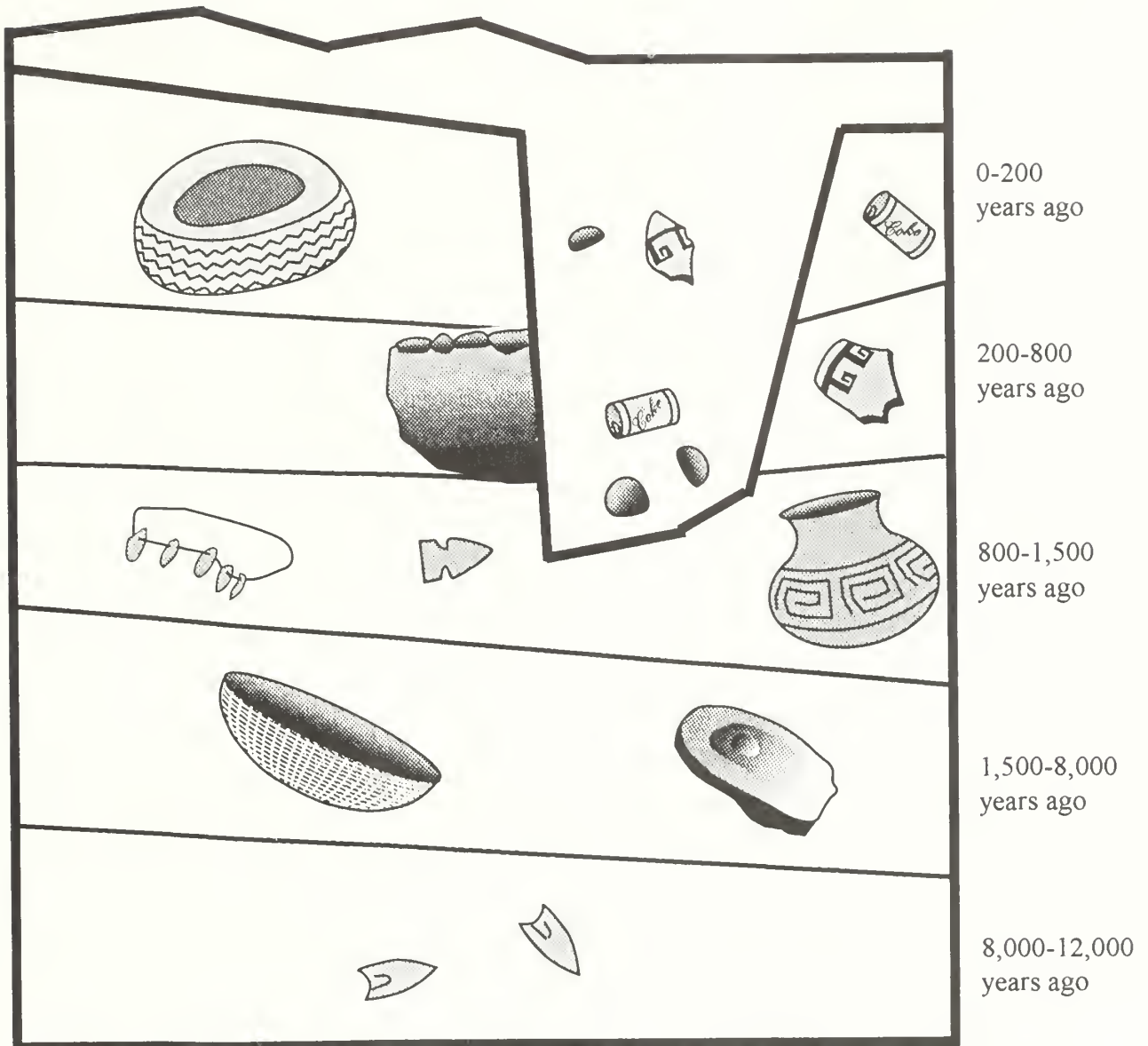
Show overhead transparency of "Stratigraphic Section." Ask students how the layers here are like their timelines. Ask students what will happen now if archeologists tried to reconstruct the layers, having only the disturbed area to look at.

Extension:

Lead a discussion with the class, asking, "Who does the past belong to?" What can they do as students to help with preservation? Note that some states have sepulchre laws protecting grave sites, even on private land.

My Time Line	Event
Today	

Stratigraphic Section



Key



tire



potsherd



rock



necklace



fire hearth



basket



popcan



pottery



projectile point



mano & metate

Peanut Butter and Jelly Archeology

Subject: Archeology

Time: 45-60 minutes

Location: Pre or Post Site

Strands: Culture



.....
Objective: Students will discover how time is recorded in layers in archeology.

Method: Students will examine stratigraphy through building an edible archeological site.

Background: This may be a student's first experience with stratigraphy. Stratigraphy is defined as the arrangement of rocks or materials in layers. As layers are deposited, the oldest is usually on the bottom and the youngest on top. By examining materials found in these layers and their relationships to each other, archeologists can determine what artifacts are older or younger than others.

A habitation site is a place where people have lived. Prehistoric habitation sites may be marked by postholes, cooking pits, middens (trash pits) or broken pottery or artifacts.

.....
Materials:

For each pair of students:

3 slices of any type of bread
2 Tbls jam or jelly

2 Tbls peanut butter

Raisins

Sprinkles

Hard candies or M & Ms

2 Paper plates

Plastic knife

Plastic spoon

Large straw

.....
Suggested Procedure:

1. To keep costs minimal, have students bring the ingredients from home. This activity works best if the students are paired. Dispensing the ingredients onto paper plates about the room also facilitates this activity.

2. Tell the students they are going to conduct an experiment in archeology and then eat it. Pair the students and have each pair obtain a paper plate with the above ingredients.

3. Use the following narrative to tell the students what is occurring.

4. Here we have a field somewhere in southern Ohio. (Lay down a slice of bread.) Along comes a flood and leaves behind a layer of mud. (Spread the peanut butter) Shortly after the flood, a group of Archaic peoples camp in the area and build a fire. Their fire leaves behind charcoal and rock that cracks from the heat. (Have students slice raisins in half and arrange them in a circle on the sandwich, and sprinkle chocolate sprinkles about inside the circle.) The Archaic peoples leave and through time, a layer of dirt and rock forms over their campsite. (Lay down another piece of bread) Eventually another group, this time of Hopewell peoples, comes to the same field. The Hopewell peoples build shelters. (Have students gently cut small indentations or holes in the

last slice of bread. These represent the holes dug to hold posts for the shelters.) The Hopewell peoples make fine pottery. But some pottery does get broken. (Have students dig two more small holes in the top of the bread, one on each side [This will prevent later arguments]. Into these holes they throw the broken "pottery" (broken M & Ms or candies.) The Hopewell leave the site, and because it is close to the river, the site is flooded. (Students spread jelly, which may cause some redistribution of pottery, a situation which can also occur on a real site.) Through time, other layers are laid down until the present and the final layer of dirt covers the site. (Students put on top layer of bread).

5. After the students finish making their "sites" or sandwiches, have them exchange sites. Tell them as time passes the land changes hands to other American Indian groups and to the European settlers.

6. In 1997 an archeologist suspects this field was a prehistoric habitation site and conducts random core samples and surveys. (Have students push large straws randomly through their sandwiches. If they find a sprinkle or hit something, they may have found a habitation site.) The archeologist conducts a test excavation at the site. (Students cut a square into the sandwich and remove layers, one by one. If they find something, they have found the habitation site.)

7. From the test unit, students can see their layers. This is stratigraphy. Ask the students to identify the oldest layer. Which habitation site is older? This is similar to what happens when we examine a site.

.....

Evaluation:

Ask students if they could read their layers if they put the sandwich in the blender. Explain to the students that this is what happens when we plow, loot or bulldoze a habitation site. To fully excavate this site, students would have to remove each layer, layer by layer. Would they have the sandwich then? Excavation is a destructive process. For the final excavation, students may divide and eat their sandwiches, either layer by layer, or all at once. (Alternatively, if they eat it all at once, and find a pottery sherd before it is eaten, it may be considered salvage archeology, or archaeology done in the face of impending loss. If it gets in their mouth before they "discover" it, it is lost in the action of modern use.)

Playground Archeology

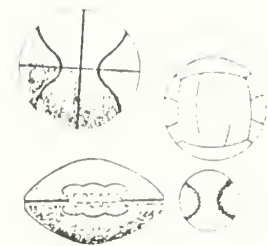
Subject: Archeology

Time: 1-2 hours

Location: Pre or Post Site

Strands: Geography, Science

Learner Outcomes: Fourth Grade: Citizenship # 4, 5, 6, 7
Sixth Grade: Citizenship # 8, 9; Science #3, 8, 17



.....

Objectives: 1) Students will learn archeological terms and methods.
2) Students will develop and use mapping skills and grid systems for mapping a given area.
3) Students will learn to classify, analyze and interpret the items collected.

Method: Students will "excavate" a portion of their playground.

Background: Archeology has been described as both an art and a science. Archeology as an art began in prehistory the first time an item from the past was picked up, admired, displayed or used by the finder. Archeology as a science is only about 200 years old with the greatest advance in technique and methodology occurring with the last 35 years. Archeology concerns itself with the material past of humans. Things human-made or items from nature used by humans interests the archeologist. These include tools, buildings, jewelry, animal remains, clothing and earth disturbed by human activities.

Popular books and films glamorize the work of the archeologist, especially the aspect of collecting materials. However, field work, scientific digging and collecting is only a small part of the work of the archeologist. The bulk of the work involves classification, analysis and interpretation of objects found by the archeologist. Artifacts are often small pieces of broken ceramics, minute bones of animals used by prehistoric peoples, particles of plant remains or other mundane articles. The value of analysis and interpretation by the archeologist cannot be overemphasized. It is in this realm of the science that the greatest understanding of the lifeways of ancient people can be gained.

Collecting may be done in varied settings: caves, open fields, stream beds, habitation sites, et cetera, but wherever it occurs the methods used are most important. Archeologists use a grid system to mark any finds. These grids may be vertical, horizontal, or both, depending upon the site. Artifacts and features (Example: house basins, garbage pits and fire pits) are marked as to location, mapped, and photographed. Careful notes are made in journals concerning the site.

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Suggested Procedure:

1. Select a playground area. (It can be either grassy or blacktop.) If a broadjump pit or sandbox area is available, they can also be used. Check ahead for any dangerous or undesirable materials. The area can be seeded in advance using pens, shells, hair pins, acorns, leaves, ceramic pieces, old jewelry pieces, et cetera. Be careful of sharp edges in the playground area.

.....

Materials needed:
Playground area
"Artifacts"
String or twine
Trash bags
Paper and pencil
Tape measure

2. Divide the playground into areas. Assign a group of students to each area. Students should then make a grid to map the area assigned using string or twine on the ground surface.
3. Estimate the area by pacing. Check accuracy by actual measurement.
4. Compare the measurements. How accurate is estimation by pacing?
5. Draw the grid and sketch location of objects on paper.
6. List the objects found and where located on the grid.
7. List any plant or animal materials found in the area.
8. Using the list of objects found, have each group prepare an oral report to answer the following questions:
 - Which object is most valuable for indentifying the culture? Why?
 - How did the objects get there? (People, animals, wind, et cetera)
 - What do the objects tell about the people who inhabited the area?
 - Is the area shady, sunny, forested, plains, hills, sloping, swampy or what?
 - What will or will not decompose?
 - What could be recycled or reused?
 - What are the uses of the objects?
 - Are they still useful?
 - Why are objects more concentrated in some areas?
 - Does a concentration of objects tell anything about the use of the site?

.....

Evaluation: Make comparisons of the areas. What event may have taken place here? (Determined by what was found.) Was this a home, a ceremonial site or market site?

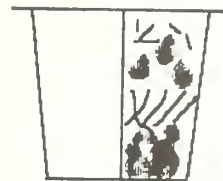
See also: Excavate a trash can, Artifact Identity, Observation or Inference

Excavate a trash can

Subject: Archeology

Time: 60 minutes

Location: Pre or Post Site



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Objective: Students will learn various archeological methods.

Method: Students excavate the classroom trash can using archeological methods.

Background: Excavation of ancient garbage dumps, called middens by archeologists, is a very important way of learning about the people who made them.

Practice some archeological methods and learn about yourselves by excavating the classroom trash can. Remember you will destroy this site by excavating it, so you should record as much information as possible as you excavate.

.....
Materials:

Two pieces of graph paper per student

Pencils

Trowel

Rulers

Chalk

Baggies

.....
Suggested Procedure:

1. Mapping: Archeologists locate sites on maps. Students should locate their site on a map by drawing a map of the classroom and locating the trash can on the map. Be sure to include the address of the site, the classroom number, and the site name on the map. Refer to Diagram 1.

2. Planning: Ask the students, "What do you expect to learn from excavating this site?" Determine what tools they will need from the classroom for their excavation. They will probably need pencils, paper, a ruler, paper bags, et cetera. In their field notebook (which can be a piece of paper) have the students describe how they intend to excavate the trash can. Ask the students, "Will you use shovels, a trowel, tweezers, or your hands?" (Show the students a trowel and explain that it is used to remove small amounts of dirt by scraping.) "What layers might you expect to find in the trash can?" (They may find all the spelling papers you just gave them or a layer of snack trash from break.)

3. Stratigraphy: Have a group of students begin the excavation. There are two different ways this site can be excavated to help students understand stratigraphy. One way is to excavate the trash in measured levels. For example, the top level could be the first six inches from the top down of the can. The second level could be from 6 inches to 12 inches from the top. The levels can go on like this until the bottom of the trash can is reached. Each level of trash should be placed into bags labeled accordingly. Let a different group of students excavate each layer. Refer to diagram 2.

4. An alternative is to excavate the trash according to natural (or cultural) layers. For instance, students may find in the trash can layers made mostly of a certain kind of material such as construction paper, notebook paper, food items, pencil shavings, discarded pencils, crayons and so on.

Excavating by cultural layers is a bit trickier than excavating by measured levels. You have to be aware of where each level begins and ends and you have to be sure you record these level on you maps and in your notebook. For both methods of excavating, it might help to mark the boundaries of each level in chalk on the outside or inside of the trash can. This will help the students when they make a diagram of the different levels. Refer to diagram 3.

5. Recording: Have students record in their field notebooks (a piece of paper may be used) how they excavated and what they found in each level. Include a brief description of the artifacts and their positions. Measure how far from the wall of the can and how far from the top of the can the artifacts were located. Refer to sample 4.

6. Mapping: If the students have enough time have them draw a diagram of the trash can's contents after excavating each level. Refer to diagram 5.

7. Profile: A profile is a diagram of the stratigraphy of the site. Usually profiles are made when a site has been excavated in sections. For example, students may divide their trash can in half, and remove half its contents. Then a profile is made of the midline of the trash :

Draw a profile of what you see facing this:



Students probably were unable to excavate the trash like this. They can draw a profile of the trash if they excavated by natural levels. From the chalk lines they made on the trash can which showed where the natural layers began and ended, have the students draw a diagram of these lines and show what was in each level. Refer to diagram 3.



Side view

.....
Evaluation/Interpretation: After students complete the excavation, have them examine their artifacts. Students may write a short report describing what they found at their sites. From their field notes, have students make observations about the people who deposited the trash.

Were the artifacts the students found on the bottom of the trash can placed there before or after the artifacts found on top? What would happen to the student's analysis if someone had shaken the trash can up or had removed some objects from the bottom of the can before they excavated?

Would the students expect to find similar sites in other classrooms? Would the contents of the site change if it was in the art classroom? If they had not been familiar with the artifacts they found, what might they think some of them were used for?

From their field notes, would students be able to reconstruct the site so that it looked exactly like it did before excavation?

Students may exchange field notes and maps with other groups in the classroom to see if the other students reach the same conclusions about the site and the people who made it.

Extension: The teacher may wish to exchange trash cans with another classroom or borrow a trash can from the principal's office and see what the students can learn about other sites.

See also: Playground Archeology.

Smith - Trash Can
Kings Elementary School
- 136 Southwell Rd.
Kings, Ohio
Classroom # 121

Mrs. Smith - Teacher

Hallway

door

Blackboard

Mrs. Smith



Smith
Trash Can

Tom

Joe

Jerry

Joan

Sarah

Lisa

Vern

Mike

Bob

Ann

Terry

John

Fred

Alvin

Sam

Frank

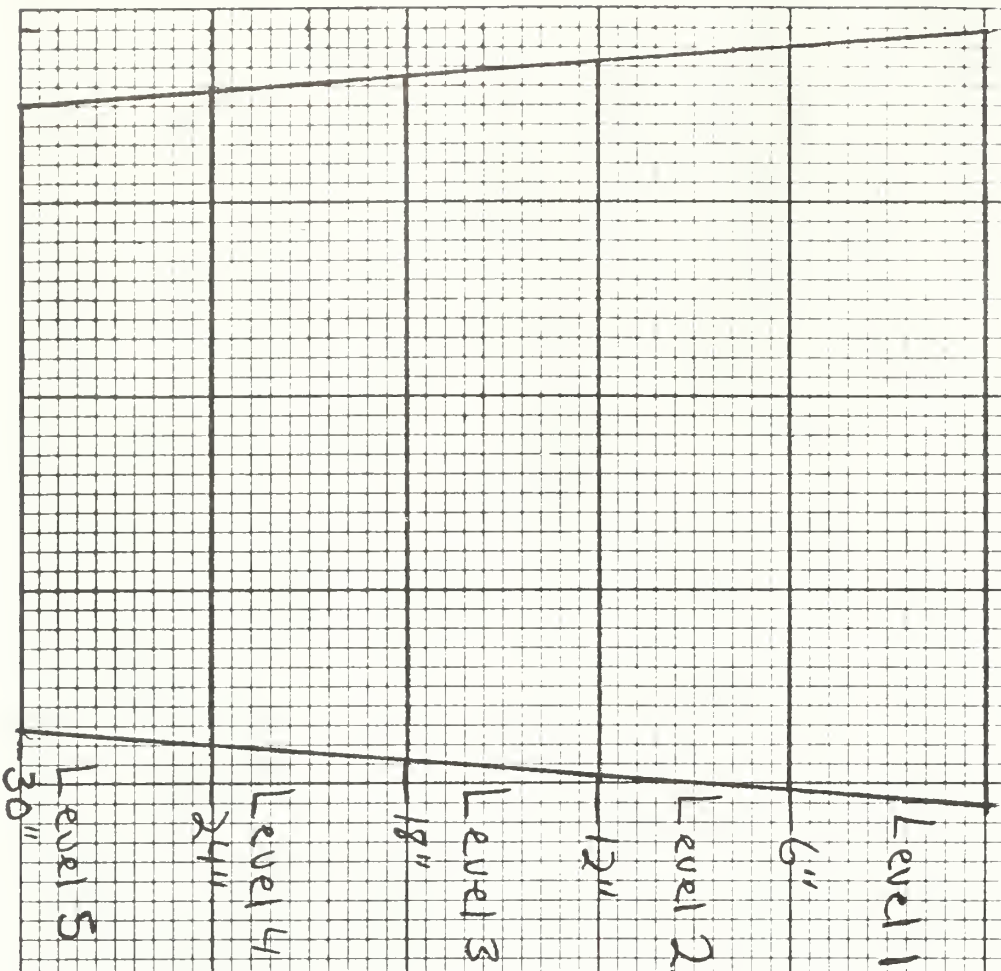
Mrs. Brown's
Classroom

Bookcase

Mrs. Fry's
Classroom

Diagram 2

Stratigraphy Excavating by measured Levels



Label the different levels. Excavate one level at a time. Place contents in labeled bags.

A Label Bag

Smith Trash can Name of Site

Level 1 Which level

12/08/78 Date excavated

USA, Fred Excavators

Stratigraphy

Excavating by Natural Levels



Sample 4

Smith Trash Can

12/8/95

Level One

We found 10 wads of crushed notebook paper with some pencil shavings sprinkled throughout. One crushed paper bag was found, which measured 10 inches by 5 inches. Inside the bag was a small piece of clear wrapping paper, probably "Saran" wrap. There were bits of food attached to the wrapping, probably from a piece of cake or bread.

One wooden yellow pencil was found, 3 inches from the top of the can. It measured 2 inches from its point to the end of the eraser. The eraser portion was worn down to the metal part of the pencil:



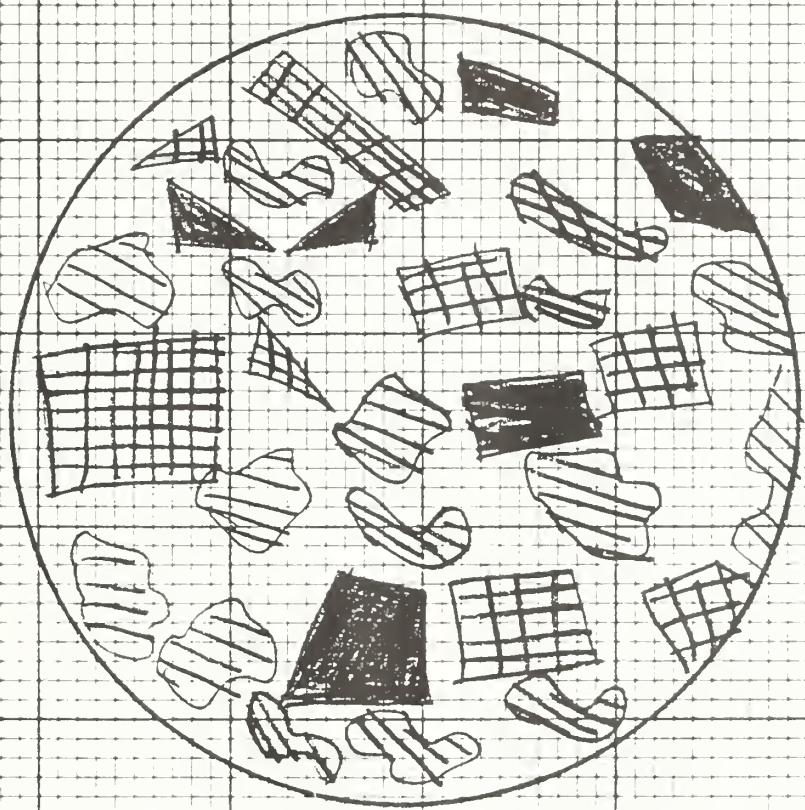
Level Two

From 6 to 9 inches from the top of the can, we found 7 pieces of crushed notebook paper. In the lower part of level 2, from 9 to 12 inches, we found 22 different colored pieces of construction paper. They were different sizes, from 2 inches by 1 inch, to 5 inches by 10 inches. They were different shapes. These scraps were probably waste products from some kind of project which needed construction paper. The following list shows how many pieces of different colors we found:

Yellow -	3
Red -	1
Green -	8
Blue -	4
Purple -	6

Continue to describe the contents of each level. Describe both the unusual artifacts and the common artifacts in detail, including their size, color, material and position in the can.

Smith Trash Can Level 1 after Excavation



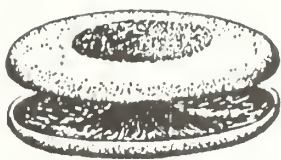
/// - Crumpled
notebook
paper

■ - Construction
paper

magazine

Artifact Interpretation

Subject: Critical thinking/Cooperative learning
Time: 30 minutes
Location: Pre or Post Site



- Objectives:**
- 1) Students will assess the characteristics of a society based on analysis of a single object.
 - 2) Students will learn the difference between observation and inference.
 - 3) Students will use critical thinking skills to analyze, brainstorm, and interpret the item being examined.

Materials:
Penny for each student

Method: Students will examine an artifact and analyze what it tells about a given society.

Background: Among the artifacts an archeologist finds at a site, sometimes a single object will provide vast amounts of information about a society. An example is a penny. It reveals information about our society's technology, dress, leaders and numerical system. From a penny, an archeologist could gather certain observations about the society from which it came, such as:

- *The society had access to minerals and had a knowledge of metallurgy.
- *Men in the society wore or had worn facial hair.
- *The society was capable of erecting large, open air monuments, so there was a knowledge of mathematics and architecture.
- *The society had a numerical system.
- *The society had a written language.

The above information can be obtained through observation. From the coin, we may be able to infer other information. We can make the inference that the makers of this coin valued liberty. We cannot observe this. (How do we know that "Liberty" spells out a value, and not the name of the bearded man?)

Suggested Procedure:

1. Divide the students into groups of three or four. Distribute one or two pennies per group and tell the group to decide on one individual to record the group's findings on paper.
2. Ask the students to imagine that this artifact comes from an unknown society. Their task is to analyze the artifact and determine as much as possible about the people who made this artifact.
3. Explain to the students the difference between observation and inference.
4. After ten minutes, ask teams to present their conclusions.



Evaluation:

Lead students in a discussion about the details that can be learned about a society from examining an artifact such as a penny. Discuss the problems of making assumptions about another culture based on how our culture lives. For example, archeologists assumed for years that the Hopewell peoples were a hunting and gathering society. New evidence indicates that they may have also grown crops. Assuming they were a hunting and gathering society implies a society that seasonally moves, following the food source. The new evidence would suggest a population that may have been more sedentary than previously thought.

How is this Used?

Subject: Critical Thinking
Time: 1 hour
Location: On-site
Strands: Mathematics



-
- Objectives:** 1)Students will use a grid system to draw an artifact.
2)Students will use critical thinking skills to hypothesize how a given object may have been used.
3)Students will use critical thinking skills to draw parallels to contemporary tools.

.....

Materials:
Paper, pencils and rulers
Hopewell tool kit*
Modern tool kit**

Method: Students draw artifacts and discuss those objects and their contemporary counterparts

.....

- Procedure:** 1) Ask students to select an artifact from the Hopewell Tool Kit and draw that artifact using a grid system.
2) Ask students to consider the purpose for which the tool might have been used based on its shape, structure, and the material from which it is made.
3) Using a contemporary tool kit, allow students to guess the tool that is used in the same way. Lead students in a discussion about the similarities and differences among artifacts in the Hopewell Tool Kit and the contemporary tool kit. (What is the same about these tools? How are they made? Where did the materials to make these tools come from? What do we know about their makers?)
-

Extension:
Ask students to write a biography of a prehistoric tool maker.

*Available for loan from Hopewell Culture National Historical Park
**Use school or classroom toolbox, once hazardous materials removed.

Hopewell Tool Time

Subject: Critical Thinking
Time: 45 minutes-1 hour
Location: On-site
Strands: Culture, Economics, Science
Learner Outcomes: Fourth Grade: Citizenship # 4, 5, 6
Sixth Grade: Citizenship #6, 12; Science #15



- Objective:** 1)Students will brainstorm in groups ways in which certain mystery tools were used.
- 2)Students will learn how the Hopewell used the natural resources available to them to fashion tools needed for daily living.
- 3)Students will compare the functions of prehistoric tools to their modern counterparts.

Method: By observing form and shapes of tools from the past, students make predictions about tool functions.

Background: Native Americans used stone, bone, wood and shell to make tools and utensils. The material, its natural shape and structure determined how it would be used. Shells were used as hoes, scoopŕ, scrapers and cups. Stone was used to make projectile points, knives, scrapers, hammers, fish net weights and many other implements. Sometimes one of these objects was used to fabricate a tool of another material. For example, antler tips were used as pressure flaking instruments in the making of projectile points.

Stone continues to be used today: some surgeons prefer scalpels and surgical instruments made of obsidian, a stone used by the Hopewell. Many students throughout Ohio, particularly rural students, are familiar with stone tools. Some students in rural areas may even have stone tools in family collections.

Procedure:

1. Students break into groups to brainstorm how a tool from the Hopewell tool chest was used. Creativity and critical thinking are the goals here. After a brief period of brainstorming, the students report their tool’s possible uses.
2. Students then visit the library to research what others (i.e., the “experts”) have said the tools were used for. If no resource material is available in the library, check the Tool Trunk for its resource books.

3. Alternatively, students may research modern implements that serve the same function.

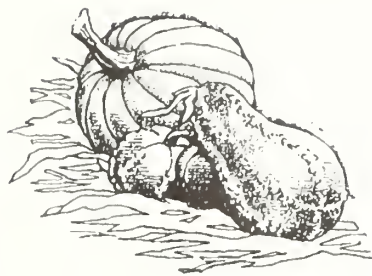
Extension: 1) See also "Whose culture is it anyway?"

2) Students may write a paragraph on how they would make a certain tool if they lived 2000 years ago.

*Available for loan from Hopewell Culture National Historical Park

What's for Dinner, Mom?

Subject: Culture
Time: 25 minutes
Location: Pre or Post Site
Strands: Culture



.....
Objective: Students will use a timeline to determine what Hopewell peoples may have eaten 2000 years ago.

.....
Materials:
Copies of "What's for dinner?"
Pencils

Method: Students prepare menus using a timeline of available foods.

Background: From hearth pits, storage pits and refuse pits archeologists have begun to piece together the prehistoric Hopewellian diet. Diet for the Hopewell was varied and well rounded. Resources for the Hopewell may have been so abundant some scientists have estimated that these peoples may have had to work only half a day to meet subsistence needs!

Although the available resources allowed for a varied diet, the diet was seasonally dependent. For example, fish may not have been available in the winter when the river was frozen and ducks may have been most available when migrating in spring and fall. This activity explores the year round diet of the Hopewell peoples and asks students to figure out how the foods may have been preserved.

See also Support Materials, "Supptime: 2000 years ago".

.....
Suggested Procedure:

1. Discuss with the students what they had for breakfast or dinner the night before. Then ask them what the Hopewell may have eaten 2000 years ago. Students may even brainstorm a list of potential foods.
2. Pass out to each student copies of "What's for dinner, Mom?" Discuss with them how to read this timeline. You may want to discuss the various foods listed on this sheet.
3. Have the students answer the questions and create the menus at the bottom of the page.

.....
Evaluation:

Finish by discussing with the students whose diet they would prefer: theirs or the Hopewell's. Ask them who had the more varied diet. Ask them what would happen if one thing failed in the timeline, i. e. it was a bad year for grapes, or ducks. Ask them what would happen if it were a bad year in modern times for wheat or corn. Could we learn more from these varied diets?

Extension:

You may want to recreate some foods in the classroom.
Have students find pictures or sources of some of these foods.
Discuss Hopewellian ways of cooking. How do you cook without metal kettles and pots?

	Fishing	Duck hunting	Deer hunting
	Berry picking	Grape picking	
Mushroom picking	Collecting mussels	Knotweed	
		Little barley	
		Sunflower	
Harvesting Maygrass		Gathering nuts	
Collecting greens	Squash		
		Goosefoot	
Deer hunting			
Duck hunting			

If you lived two thousand years ago, would you be able to keep food very long? No

How would you keep it for longer periods of time? By drying, burying in storage pits, smoking.

Keeping in mind these ways of preserving food, see if you can determine what a Hopewell family may have been eating at different times of the year. Prepare a menu for the midday meal for each day listed.

May 1	October 31	December 22	August 1
Examples: Mushroom Stew with greens and maygrass	Roast duck with nuts and goosefoot	Deer and acorn stew	Mussels steamed in squash, blackberries

What's for dinner, Mom?

What was on the menu for the Hopewell peoples 2000 years ago? Mussels and cherries? Fresh steamed fish on a bed of mushrooms and greens? On this time line, you can see what foods were available during different times of the year. How would you go about collecting and preserving these foods?

January	February	March	April	May	June	July	August	September	October	November	December
Deer hunting-----	--Duck hunting-----					Fishing-----			Duck hunting		Deer hunting-----
				Mushroom picking		-----Berty picking-----		Grape picking			
						Collecting mussels		-----Knotweed			
								---Little barley			
								---Sunflower			
				Harvesting Maygrass				Gathering nuts-----			
		-----Collecting greens-----					-----Squash-----				
								---Goosefoot---			

January February March April May June July August September October November December

If you lived two thousand years ago, would you be able to keep food very long?

How would you keep it for longer periods of time?

Keeping in mind ways of preserving food, see if you can determine what a Hopewell family may have been eating at different times of the year. Prepare a menu for the midday meal for each day listed.

May 1

October 31

December 22

August 1

Habitats of the Hopewell

Subject: Ecology (Environment)

Time: Homework

Location: Pre or Post Site

Strands: Economics, Culture, Science

Learner Outcomes: Fourth Grade: Citizenship #1, 4, 5, 6

Sixth Grade: Citizenship #6; Science #15, 17



.....

Objectives: 1) Students will compare three habitats in the environment where the Hopewell lived.

2) Students will brainstorm how the Hopewell met their needs with the resources available to them.

Method: In a take-home assignment, students create collages of what may have existed in the Hopewellian environment. Upon returning to the classroom, students tell how the Hopewell used these resources available from these environments in their daily lives.

Background: Archeologists think the Hopewell landscape was one of forests with pocket prairies, interlaced with rivers and streams. It is from these diverse habitats that the Hopewell gathered the raw materials needed in their daily lives. Keep in mind that the Hopewell environment supported many plants and animals now extinct or gone from Ohio. These include elk, bison, passenger pigeons, wolves and such plants as American chestnut (which is still found in Ohio, but rarely reaches adulthood), wild comfrey, and dewberry.

.....

Suggested Procedure:

1. Lead students in a discussion of habitats, defining habitat as the place where you live.
2. Students are given the homework assignment of creating collages. Students will make one collage for each of three habitats: prairie, forest and river (stream). From magazines and newspapers at home, students collect pictures of plants and animals associated with these habitats. These pictures are glued into place in the collages, in the appropriate habitat. For example, grass would go in the prairie collage, and the squirrel would go in the forest collage. Other examples might be included on two collages: deer would be in both prairie and forest, as would mice.
3. When the students bring in their collages lead a discussion on what may have been here and what might not have been here 2000 years ago. For example, wolves and American chestnuts may have been here, while dandelions were not.
4. If the students have an item on their collage that was not here 2000 years ago, they can "black" out that item with a construction paper cutout.

.....

Materials:

At home,
students will
need poster
board, glue, old
magazines, scissors
At school,
need scissors,
black construction
paper

5. Using the examples on their collages, have students determine how plants and animals were used by the Hopewell peoples. For example, fish from the river provided food. Deer provided food, clothing and tools. Trees provided food (nuts and berries), fuel for warmth and housing materials. Plants provided food, medicine, and fibers for weaving.

.....
Evaluation:

You may want to lead a discussion on how we use our environment. Alternatively, discuss with students how the local habitat has changed with the removal of some species such as bear and loss of habitat like the tallgrass prairie and the introduction of other species such as coyote and Canada thistle.

Today and Yesterday

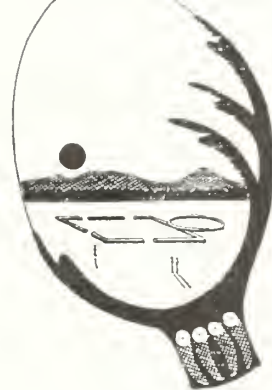
Subject: Critical thinking

Time: 30 minutes

Location: Pre or Post Site

Strands: Culture

Proficiency test: Fourth Grade: Citizenship # 6
 Sixth Grade: Citizenship #7, Reading #5



.....
Objective: Students will compare characteristics of contemporary people with characteristics of the Hopewell in respect to shelter, food, and clothing.

.....
Materials:
Copy of Today
and Yesterday

Method: Students will complete a chart comparing their lives with those of the Hopewell.

Background: We all have the same basic needs: food, water, shelter and space. Yet the ways in which we meet these basic needs are as diverse as our habitats. While our needs are essentially the same as the Hopewell, the way we meet them is quite different. This activity compares our culture with the Hopewell culture.

.....
Suggested Procedure:

1. Lead students in a discussion of basic needs, by brainstorming a list of basic needs. Eliminate all non-essentials until the list approximates the list on the blackline master.
2. Pass out copies of "Today and Yesterday " and have students fill in the boxes. On some areas, if they cannot name the item, they may draw it. For example, if they cannot name the shelter, they can draw a picture of it.

.....
Evaluation:

Lead students in a discussion of what items on the list are the same. Which ones are different? Were these people like us or very different?
See also: "Whose culture is it anyway?"

TODAY AND YESTERDAY

Today

Hopewell

Sites

Chillicothe
Bainbridge

Mound City Group
Seip Earthworks

Types of shelter

Apartment
House
Mobile home

Bark house

Food

Pizza
Cheeseburgers
Soda Pop

Deer
Squash
Nuts

Clothing

Jeans
Athletic shoes
T-shirts

Skirts,
Breech clothes

Unique characteristics

Technology
Plastic
Grocery stores

Enclosures
Native materials
Use of Native plants & animals

TODAY AND YESTERDAY

Today

Hopewell

Sites

Types of shelter

Food

Clothing

Unique characteristics

Whose Culture is it Anyway?

Subject: Anthropology

Time: 30 minutes

Location: Pre or Post Site

Strands: Culture, Global

Learner Outcomes: Fourth Grade: Citizenship #1, 4, 6; Writing #4 d, h

Sixth Grade: Citizenship #5, 6, 7; Writing; Historical #2

.....
Objective: Students will complete a chart to show the different ways that cultures meet basic human needs.

Method: Students compare cultures using a chart.

Background: Culture is defined as the behavior patterns, arts, beliefs, products of human work and thought typical of a group or population. These are usually behavior patterns passed down from older generation to next. Cultural anthropology is the comparative study of humans and their behavior. Cultural anthropologists usually study behavior by observing the members of a cultural group as they live their lives and interact with one another. Archeologists learn about past cultures by analyzing material evidence (sites and artifacts).

People everywhere have several basic needs which must be met. These basic needs may be categorized as follows:

1. The need for food and water (subsistence economy).
2. The need for protection from the elements (clothing and housing).
3. The need to sustain the culture (marriage, kinship, education).
4. The need for explanation (religion, philosophy, science).

What must be satisfied is universally human. How needs are satisfied is cultural. The many different ways that cultures have evolved to meet the basic human needs results in the world's rich cultural diversity.

When studying other cultures, there is a tendency to emphasize the differences among people and to look at other cultures ethnocentrically. Cultures with less sophisticated forms of technology are frequently portrayed as simple-minded and naive. However, on the contrary, such people often have unequaled understanding, knowledge, and adaptability to the environments in which they live. It is important not to accentuate "them" and "us". When scientifically studying other cultures it is necessary to suspend judgement. One culture is neither better nor worse than another, just different.

A basic assumption of archeological study is that people who lived in the past had the same basic needs for existence as do people living in the present. Archeologists are anthropologists who study past cultures by analyzing material remains (artifacts and sites) to learn how people met their basic needs.

Many people mistake archeology for a swashbuckling "Indiana Jones" adventure, and archeologists often are thought of as questing after rare and beautiful artifacts. Although it is true that at times archeologists do find rare and beautiful things, they could more accurately be compared to Sherlock Holmes, a detective of the past, gradually piecing together the culture of a



.....
Materials:
"Comparing Cultures" activity sheet

people to understand more about them. A lone artifact discloses very little about a culture. It is by studying many sites and artifacts and their relationship to each other and the environment that one discovers the way people lived. Archeologists study a people's culture by studying the things they left behind. We share the same basic needs as these past cultures: we also learn about ourselves through archeology.

.....

Suggested Procedure:

1. List on the board students' responses to the following: What do you need to have in order to live?
2. Now, help students categorize their list. They do not have to arrive at the four categories listed above. Anthropologists themselves do not agree on how to categorize their needs. For example, the students may come up with eight needs: food, water, shelter, clothing, reproduction, transportation, education, and explanation.
3. Distribute the "Comparing Cultures" activity sheet to the students. Write the category of basic needs (food, shelter, etc.) down the vertical column on the chart's left side.
4. The students complete the chart, comparing and contrasting the basic human needs as they are met in different cultures.
5. In a class discussion, the students compare and contrast our culture with others. If the Hopewell culture seems strange or inferior to the students, inform them that our culture can be baffling to people from another culture. For example, Hindus are horrified at the thought of eating beef; it is against their religion to do so.
6. Explain that because archeologists can neither ask the people who left the artifacts how they meet their needs, nor observe them using the artifacts, past behavior must be inferred from the material remains of the culture. For example, if corn cobs are present archeologists could infer that the people were farmers.

.....

Evaluation: As you analyze the chart, what do you notice about the ways cultures meet their basic needs? How do archeologists study past cultures? The students also turn in their activity sheets for evaluation.

This activity was adapted from an activity in "Intrigue of the Past: A Teacher's Activity Guide for Fourth through Seventh Grades". For more information on this activity guide, see the section entitled "Resources."

Comparing cultures

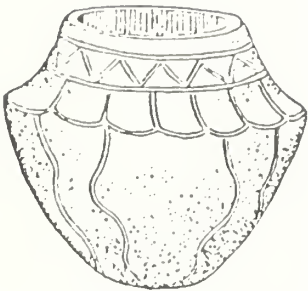
Basic Needs	Today	Hopewell
Home Economics (Food and water)	Pizza Hamburgers Fries Soda Chocolate Tacos Pie Popcorn	Sumpweed Squash Sunflower Knotweed Goosefoot Deer Little Barley Nuts
Protection from elements (clothing and housing)	Jeans, T-shirts, Athletic shoes, dresses, coats made of cotton, polyester, leather, wool. Apartments, brick houses, frame houses, condominiums.	Skirts (wrap-around type), breeches, cloths made of leather, skins, some woven materials Houses made of bent poles covered with skins or bark
Reproduction of culture	Weddings/marriage School College Family Television Family traditions/holidays	Rituals Family traditions Holidays Weddings/marriage
Explanation	Beliefs: Christianity Judaism Moslem Buddhism Taoism	Probably animistic, shamanistic (probably believed that all things had a spirit; relied on a spiritual leader who exerted influence over the spirit world)

Comparing cultures

Basic Needs	Today	Hopewell

Pots and Pieces

Subject: Culture
Time: 60 minutes +
Location: Pre or Post site
Strands: Culture



Objective: Students will be introduced to the artform of pottery making.

Method: Students will make a pinch pot or coiled pot.

Background: Approximately 3,000 years ago pottery was introduced into what is now Ross County. This early pottery was crudely made from clay with sand or grit temper. The surfaces of the pots were undecorated. The appearance of pottery may well have been one of the most important technological innovations in prehistoric North America, and it signals the beginning of what archeologists call the Early Woodland Period or Tradition. Some pottery was decorated with marks made by pressing cords or fabric against the outside surfaces. Other pottery decoration included animal and symbolic designs incised (engraved) on the clay vessels with bone or stone tools. The Hopewell peoples produced some of North America's most useful and beautiful pottery.

Woodland people gathered clay from natural field sources. Temper in the form of sand or grit was added to prevent cracking due to shrinkage. The clay was then used to make pottery vessels. Slip refers to clay thinned to the consistency of cream for use in decorating, or as a cement or coating.

Clay changes in certain and predictable stages that are necessary in the formation of the finished product. The clay goes from a formative stage to leather hard to bone dry. After this process is completed, the pottery can be fired.

Suggested Procedure:

1. Using the sheets, introduce Hopewell pottery to the students. After telling the students about pottery, inform them that they will have the opportunity to make a pot as well.
2. Cover desk areas with plastic. Make sure the students have access to water. There are two methods for making pots, as follows:

Materials:

- Clay
- Plastic tubs
- Large buckets
- Various small containers for water and slip
- Plastic bags, with ties, large and small
- Newspaper.
- Popsicle sticks
- Sandpaper
- Corn cobs
- Wrapped paddle and anvil
- Plastic utensils,
- Fork,
- Comb
- Sponges for clean-up

Pinch Pots:

Begin with a small ball of clay (golf to tennis ball size.) Punch your thumb directly into the center of the ball. Continue opening up the inside with the thumb, turning the ball continuously, striving to keep the sidewalls uniform thickness. Do not leave excess clay at the bottom. This will cause the pot to dry unevenly or crack. Using fingers, add moisture to the top edge if it begins to crack or dry too quickly. Refine wall thickness and exterior. Finish the rim by adding a coil around it. Be sure to score the rim first and slip. The rim does not have to be level to be successful.

While fingers are the very best pottery tools, other tools may aid in finishing. These scraping and smoothing tools include mussel and sea shells, eating utensils and flat sticks. If necessary, lubricate scraper with water. The paddle and anvil method is useful for consolidating wall thickness, outer vessel shape and some exterior decoration. The anvil may be a rounded stone or mushroom-shaped ceramic form held against the interior surface. When using the paddle, support (anvil) must be provided from inside at the point where the paddle is struck. To keep paddle from sticking to moist clay, wrap paddle blade with string or cord. This will also provide interesting decorative patterns.

Coil Construction:

Begin making coils by removing a golf ball sized clay lump from the storage container. Gently force the clay into long, round strips or coils. Start with both hands together and gradually move hands apart, rolling clay continuously on a flat surface to achieve round coils. To avoid having the clay stick to the work surface, roll the clay on a coarse cloth or plywood. Coil diameter depends on wall thickness of planned piece but 1/4" to 1/2" is manageable. Be sure to make coils long enough so that the ends meet or overlap and do not have to be pieced with several additions. After making several coils, begin construction by making a small, flat patty. This becomes the platform or base. Using a fork, broken comb or blade, score or scratch a series of cuts into the clay around the top outside edge of the patty and daub on a thin coating of clay slurry. This will act as a "glue" to help adhere the coils applied to it. Note how the top coil is scored. Be sure to place the construction on a portable work surface such as heavy cardboard, plastic container lid, hardboard, banding wheel, et cetera, so that it may be moved from work area to storage area, if necessary.

Gradually add coils to create vessel height. Interior surface may be smoothed with fingers, scraper, or paddle, or allow coils to become decorative evidence of construction. Adjust work time to allow coiled side walls to dry sufficiently to support additional coils on top. Otherwise, the most pliable clay will expand outward or simply collapse. Strive for uniform coil thickness, ensuring even thickness of vessel walls. Surface treatment is a personal decision. Pots may be partially smoothed, slipped with contrasting color clays, carved or incised or left to show some of the process of construction. When pots are leather hard, they may be polished with a smooth pebble, marble or even a fingernail. When bone dry they may be smoothed with a corncob or fine sandpaper. The pots should be allowed to become bone dry. If students are not firing their pots, apply acrylic Gesso to seal the surface.

Pots and Pieces

Why do archeologists care so much about broken pots?

Since the 1920s, when rigorous methods of analysis were first applied to ceramics, pottery has been one of the most useful tools for the archeologist. But why is this?

Pottery, once made and fired, is virtually **indestructible**.

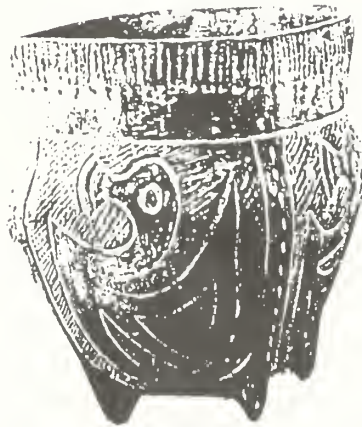
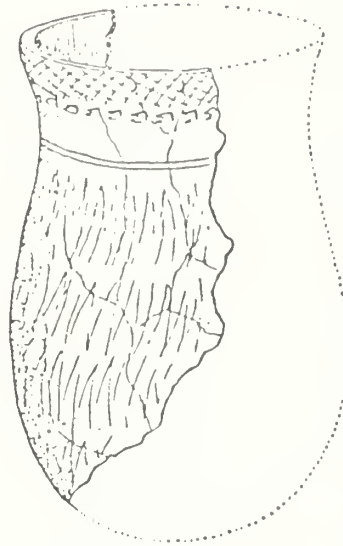
Beginning around 3000 years ago making pottery became **widespread** in Southern Ohio.

It is relatively **abundant** in any site which has been inhabited for more than a few years.

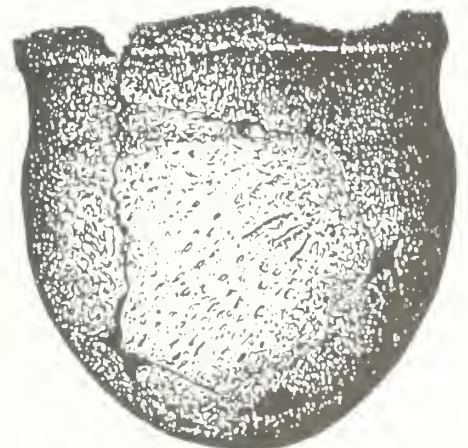
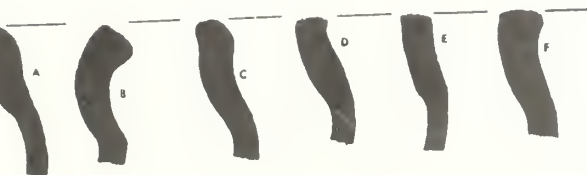
It reflects minor cultural **changes** throughout time and space because it is so easy to decorate with the style of an individual or group.

Pottery is easy to **handle, collect, store and study** relative to other types of artifacts.

For these reasons ceramic analysis is the best tool that the archeologist has to describe cultural change. It is a valuable method of cross-dating sites which have been positively dated to sites which have no carbon-14, tree-ring or archeomagnetic data available.



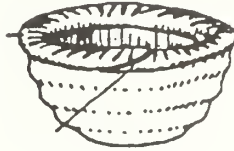
Rim sherds, Crit: 16 (5-12 mm; 10.0 mm)
(cord-marked: 6; plain: 10)
Total 168 sherds



To make a Hopewell pot...

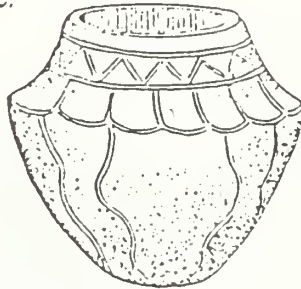
Raw clay was gathered from the surrounding area and mixed with crushed grit. The crushed grit is called temper, and is added to help prevent the cracking and shrinking which occur as clay dries. The mixture is then moistened and kneaded much like bread dough, then shaped into lumps and left to rest.

The vessel base was molded in a bowl or gourd.



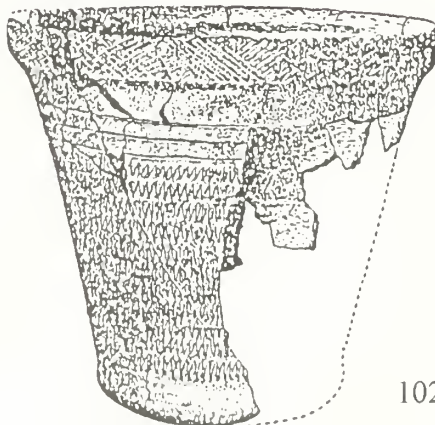
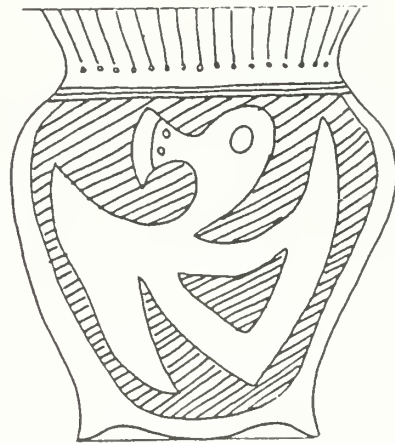
The clay is rolled out into a long coil and spiraled around the base to form the sides of the vessel.

The vessel was then hand shaped by patting and scraping with a sherd or gourd fragment using the heel of the hand to support the inside.



Next the pot was left to dry completely.

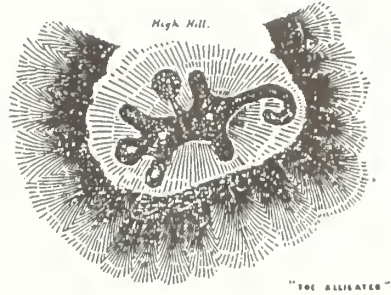
Sometimes the pot was scored with fiber-wrapped paddles, or incised by making puncture marks with a bone or tool. The vessel was sometimes polished with a smooth stone as the slip was drying. Often, the pots were decorated with fine designs like the duck pot at the Mound City visitor center.



Finally, the pot was fired. Sometimes pots were cracked or broken during firing. The exact Hopewell firing methods are unknown, but probably involved open or pit-firing.

To Build a Mound

Subject: Prehistory
Time: --
Location: Pre or Post Site
Strands: Culture



Objectives: 1) Students will research a mound or enclosure site and write a short report.
2) Students will build the mound or enclosure site from materials available at home.

Materials:
Pencil and paper
Recipe for salt clay

Method: Students research and build an earthwork or mound of choice.

Background: See introductory chapter.

Suggested Procedure:

1. After learning about mound building cultures, students choose a mound or earthwork to research and write a brief report on. They may choose any Hopewell or Adena site to research and build.
2. After researching the earthwork, students recreate it by building a model as a homework assignment. They may make the model out of salt clay, mud, or whatever materials they have on hand. A popular medium to build the model out of is chocolate cake.
3. Students bring their mounds to class and present their mounds and their research to the class.

Recipe for Salt Dough

3 cups flour
1 cup salt
1 cup water
1 tablespoon vegetable oil
food coloring

Mix flour and salt in large bowl. Add water, oil and food coloring if desired. Note: this recipe takes a lot of kneading and mixing.

Recipe for Cooked Clay

2 cups flour
1 cup salt
1 teaspoon cream of tartar
2 tablespoons vegetable oil
1 teaspoon of food coloring
2 cups of water

In saucepan, mix all ingredients. Stir constantly over medium heat until dough leaves sides of pan. When dough is cooled in pan, it may be stored in refrigerator.

Pipemaking

Subject: Art

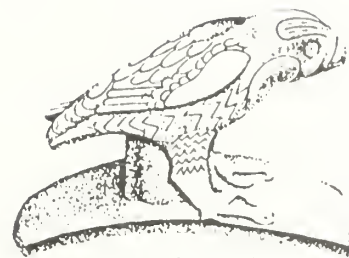
Time: 1 hour

Location: Pre or Post site

Strands: Culture

Learner Outcomes: Fourth Grade: Citizenship #6

Sixth Grade: Citizenship #7



STONE PIPE, OHIO

Objective: Students will experience a facet of Hopewell culture by simulating pipemaking.

Method: Students carve their own effigy pipes out of plaster of Paris.

Background: Mound 8 at Mound City Group was excavated by Squier and Davis in the 1840s. Within that mound were found hundreds of pipes, all in pieces. Apparently these pipes were intentionally broken, possibly as part of a religious ceremony. The pipes were both plain and carved into effigy shapes. During later excavations eight burials were discovered in Mound 8 that Squier and Davis had not found.

Pipes were carved from pipestone, a soft rock of hardened clay. They were carved with stone tools such as sharp chert flakes, then ground and polished with leather and sand. Pipestone can be found near Portsmouth, Ohio. Pipes are called pipes because they have bowls and stems. The Hopewell may have smoked tobacco or other plant materials. To Native Americans today pipes and the smoking of pipes has religious and social significance. The Hopewell too may have used the pipes for ceremonial and social purposes.

Materials:

Water

Plaster of Paris mix

Plastic kitchen
knives

Plastic to cover
table or desks

Suggested procedure:

1. Mix plaster of Paris according to package directions. Make it **very** soft, so students will be able to better carve the plaster.
2. Show the students the pictures of pipes from the tabbed dividers, telling what we know about the pipes.
3. After the students have seen the pipes, give them the table knives, a chunk of plaster and cover their work station with plastic.
4. Ask the students to carve a pipe. It may be plain or fancy. If they choose to carve an effigy, choose an animal or shape that has meaning to them.
5. This is an activity that must be finished once started. If the plaster is made too early, it will harden too much to carve. Stress to the students that their pipe cannot be used.

.....

Evaluation:

When the students have finished carving have them share their pipe with the class. Alternatively, they may write a story about their pipe. Ask them if it was easy to carve the pipe. If they were a Hopewell, what would they have used to carve a pipe? What purpose did the pipes hold? What might the Hopewell have smoked? Explain to the students that smoking probably had both ceremonial purpose and social purposes. The Hopewell were probably not aware of the hazards of smoking.

Extension:

Instead of plaster, you may want to try a soft soap or modeling clay.

How far to Yellowstone?

Subject: Mathematics, Geography
Time: 20 minutes
Location: Pre or Post Site
Strands: Mathematics, Geography
Learner Outcomes: Fourth Grade: Citizenship
 Sixth Grade: Citizenship



.....
Objective: Students will make bar graphs of distances raw materials travelled to get to Mound City.

Method: Students fill in the bar graph for distances materials travelled to Mound City.

Background: 2000 years ago southern Ohio really was the "heart of it all." Raw materials were brought from hundreds of miles away to southern Ohio. Here it was used to fashion artifacts, headdresses, ornaments, blades, points and other things. Silver came from northern Ontario, shells from the Atlantic and Gulf Coasts, sharks teeth from the Atlantic and Gulf Coasts, mica from the Blue Ridge Mountains of North Carolina, copper from upper Michigan/ Isle Royale, and obsidian from Yellowstone/Western Rockies.

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Materials:
Copies of "How far to Yellowstone?"
Samples of copper, mica, shells, obsidian

This activity compares distances these raw materials travelled using a bar graph.

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Suggested Procedure:

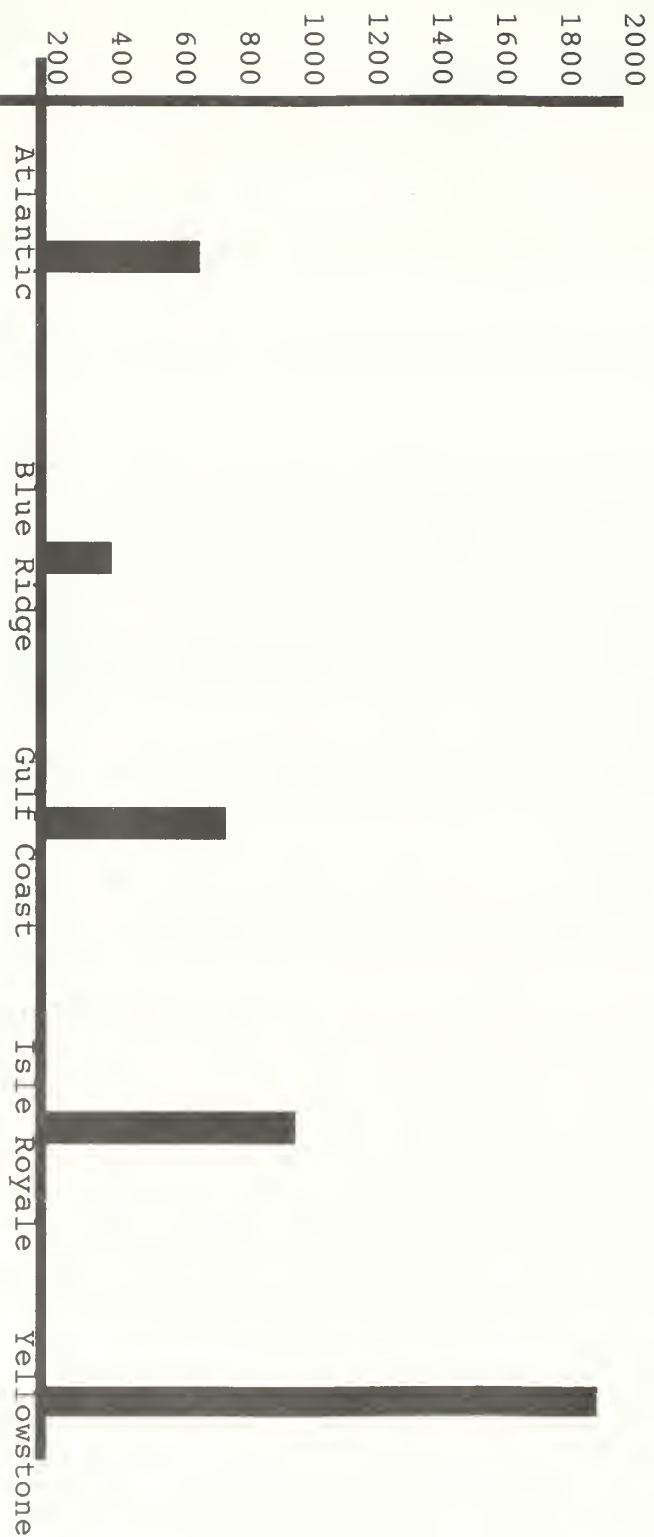
1. Tell students about the raw materials the Hopewell used in making their tools and arts. If possible, show the students some of these raw materials.
2. Have students fill out the bar graph on distances materials travelled to get to Mound City.

.....

Evaluation:

See also: Map Skills

How far to Yellowstone?



The Hopewell peoples utilized raw materials from all over the continent of North America. See if you can list what came from the areas above:

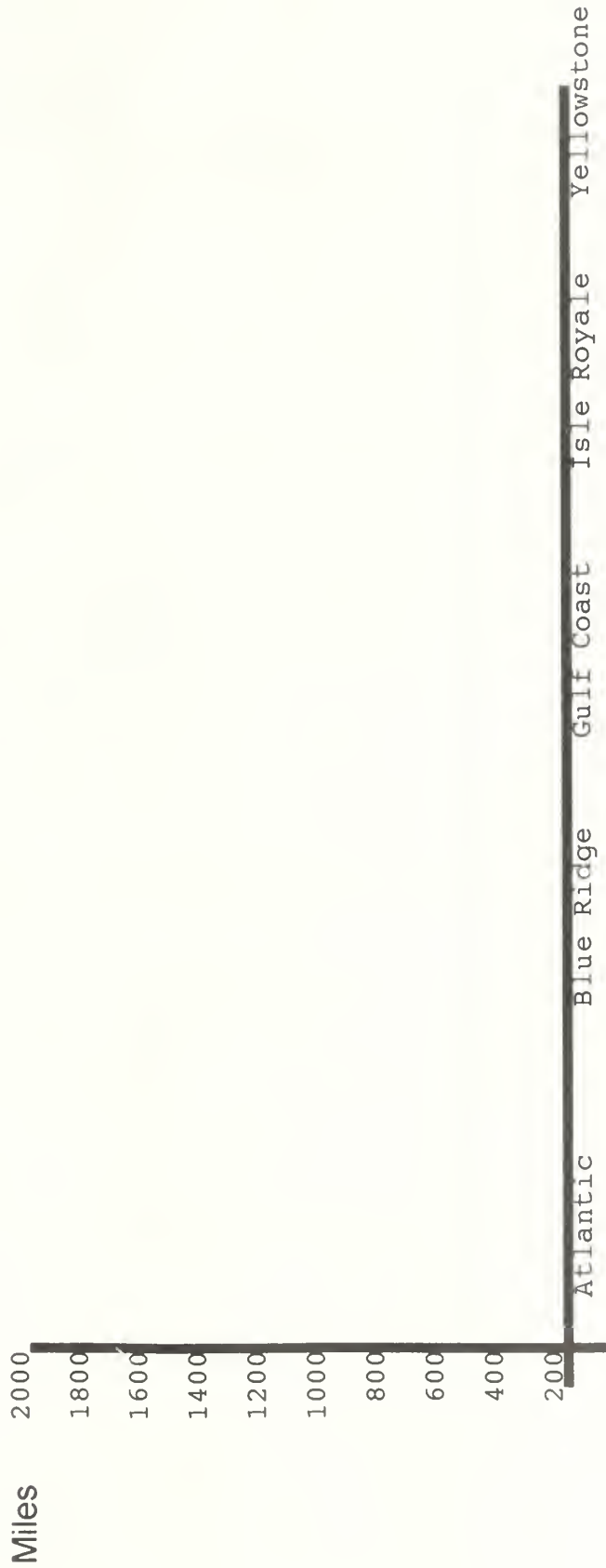
Atlantic Coast _ Shells _____ Isle Royale _ Copper _____
 Blue Ridge Mountains _ Mica _____ Yellowstone _ Obsidian _____
 Gulf Coast _ Sharks teeth _____

Below are listed the mileages to these places from Chillicothe, Ohio. Fill in the above bar graph with the correct mileage for each of the locations.

Gulf coast 770 miles Yellowstone 1800 miles
 Blue Ridge Mountains 350 miles Atlantic Coast 600 miles
 Isle Royale 960 miles

For extra credit:
 Find the areas on a map where the Hopewell peoples obtained their raw materials

How far to Yellowstone?



The Hopewell peoples utilized raw materials from all over the continent of North America. See if you can list what came from the areas above:

- Atlantic Coast _____
- Blue Ridge Mountains _____
- Gulf Coast _____
- Isle Royale _____
- Yellowstone _____

For extra credit:
Find the areas on a map where the Hopewell peoples obtained their raw materials.

Below are listed the mileages to these places from Chillicothe, Ohio. Fill in the above bar graph with the correct mileage for each of the locations.

- | | | | |
|----------------------|-----------|----------------|------------|
| Gulf coast | 770 miles | Yellowstone | 1800 miles |
| Blue Ridge Mountains | 350 miles | Atlantic Coast | 600 miles |
| Isle Royale | 960 miles | | |

Mapmaker, Mapmaker, Make me a Map

Subject: Geography
Time: 30 minutes
Location: Pre or Post Site
Strands: Geography
Learner Outcomes: Fourth Grade: Citizenship #8
Sixth Grade: Citizenship #9, 10



- Objectives:**
- 1) Students will compare and contrast maps made of an earthwork feature.
 - 2) Students will draw conclusions from their observations of the maps.

Materials:
Copies of each map for each student
Or overhead copy of each map

Method: The student will compare maps made by Squier and Davis with ones made by Caleb Atwater.

Background: Dr. Edwin Davis and Ephraim Squier are considered the fathers of American Archeology. They were the first to undertake a “scientific” study of the mounds. However, they were not the first to publish maps on the mounds found in Ohio. Caleb Atwater preceded them by twenty-five years. Squier and Davis did their surveys in the late 1840s. Caleb Atwater’s surveys were published in 1820.

Suggested Procedure:

- 1. Either pass out copies of the maps of Seip or use the transparencies of the same.
- 2. Have the students compare maps noting any differences. Ask the students why there are differences in the maps.
- 3. Have the students indicate which direction is north. Ask the students to place a compass rose in the correct direction. Have the students find Seip on a map of Ohio.

Extension: Discuss with the students the changes in transportation between 1820 and the present day.

Further notes: Caleb Atwater was a licensed surveyor who made a living by surveying. Dr. Davis was a physician and Ephraim Squier was the Chillicothe Gazette editor and a self-taught surveyor.

Locating Hopewell Culture National Historical Park

Subject: Geography
Time:20 minutes
Location:Pre or Post site
Strands:Geography

Learner Outcomes: Fourth Grade: Citizenship #8, 9
Sixth Grade: Citizenship # 9, 10



.....

Objectives: Students will locate Hopewell Culture National Historical Park and the Hopewell area of influence in relationship to a)the continental United States, b) the Scioto and Mississippi Rivers, c) modern cities such as Chillicothe, Columbus, Newark, and Portsmouth.

.....

Materials:
Transparencies
of maps of Ohio
and U.S.

Method: The student will locate and identify Hopewell Culture National Historical Park and nearby communities and rivers by labeling maps of Ohio and the United States.

Background: Hopewell Culture National Historical Park preserves several earthworks built by the culture we call the Hopewell. By excavating the mounds archeologists found materials that must have originated hundreds of miles away. They uncovered artifacts of mica from North Carolina, copper from Lake Superior, shells from the Gulf and Atlantic coasts, and obsidian from the western Rockies.

.....

Suggested Procedure:

1. Introduce students to the location of Hopewell Culture National Historical Park using transparencies and an overhead projector.
2. Locate Hopewell Culture National Historical Park in Ohio and the United States.
3. Ask students to name a couple of major cities in Ohio. Using cooperative learning skills, have students determine location of these cities. Repeat process with other major cities in the United States. Repeat process with rivers throughout Ohio and the United States.
4. Discuss the location of Hopewell Culture National Historical Park and its relationship to the rest of the United States.
5. Distribute a copy of each blackline master to every student. Students will label their home city, Hopewell Culture National Historical Park, Chillicothe, Columbus and other major urban communities, rivers, mountains, and major bodies of water.

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Evaluation: Ask students if Ohio is or was the "heart of it all"? Have students explain their answer.

Alternative: Locate other Hopewell or Adena sites on the map.

See also: Map Skills

Map Skills

Subject: Geography, Map Skills
Time: 45 minutes
Location: On site
Strands: Geography, Math
Learner Outcomes: Fourth Grade: Citizenship #7, 8, 9; Math #4
Sixth Grade: Citizenship # 9, 10



.....

Objective: 1) Students will, at the end of the session, be familiar with the span of the Hopewell influence by placing objects associated with these people on the map.

2) Students will use cooperative learning groups to determine where various points are located on the map.

3) Students will determine the cardinal points and place the compass rose on the map.

Optional: Students will estimate distances to these points.

.....

Materials:
Hopewell Living
Map Kit*
Adequate Floor
Space

Method: Using the floor size map, students will determine where the Hopewell obtained the raw materials they used to craft pipes, points and other objects

Background: The sphere of influence of the Hopewell culture stretched for hundreds of miles. The Hopewell used materials obtained from hundreds of miles away to craft objects they used everyday and objects used for special occasions. Some materials were found locally, such as flint and pipestone. Materials for other objects came from far away. Mica came from the Blue Ridge Mountains, 350 miles from here; copper from Lake Superior, and silver from Canada, both over 1000 miles from here; and obsidian from Yellowstone and the Western Rockies, some 1800 miles from here.

Also see introductory chapter.

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Suggested procedure:

1. Spread the map on the floor explaining to the students that you are going to find out if Ohio was the heart of it all 2000 years ago. Explain to the students that the Hopewell not only built mounds, but they also created fine crafts and arts.
2. Begin by placing the Mound City cutout on the "X", telling students that this was a Hopewell mound group built about 2000 years ago.
3. Have the class determine the directions of North, South, East and West, placing the compass rose on the map and labeling its directions. You may wish to lead a discussion of what landforms are on the map.

*Available for loan from Hopewell Culture National Historical Park.

4. Pass around the effigy pipe and the flint and discuss how they may have been made. Tell students that a source of pipestone was in southern Ohio near Portsmouth, on the Ohio River. Using cooperative learning skills, have the students determine the approximate location of Portsmouth. Tell the students that a common source of flint was Flint Ridge. Have the students determine the approximate location of Flint Ridge on the map.

5. Repeat the process with the mica, copper and obsidian. Mica comes from the Blue Ridge Mountains in North Carolina, copper from the Keewanaw peninsula on Lake Superior, and obsidian from the Yellowstone/Western Rockies area.

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Extension:

*You might wish to have students determine approximate mileage to these places using the mile measure included.

*Have students write biographies of a traveller during that time.

*Have students list ways the Hopewell could have travelled to get to these places. (Either by foot or by boat.)

*Play Living Map Twister. Two-four students play at a time. Pull an artifact from the box. When students determine what the artifact is, all players try to place an arm, hand or foot (in socks, not shoes) near the source of the artifact material. For example, if mica were drawn, all players would try to put a body part on the Blue Ridge Mountains. Those who didn't locate the Blue Ridge Mountains would lose a turn. As artifacts are drawn, some students may drop out after mislocating an area, or from falling. Last one standing wins.

Absolute and Relative Location

Subject: Map Skills
Time: 25 minutes
Location: Pre or Post site
Strands: Geography
Learner Outcomes: Fourth Grade: Citizenship # 7, 8
Sixth Grade: Citizenship # 8



Objective: Students will locate various Moundbuilding sites by absolute and relative locations.

Method: Students complete a chart on absolute and relative locations of various mounds and earthworks sites.

Background: At one time mounds could be found throughout eastern North America. The sphere of influence of the Hopewell stretched for hundreds of miles, yet their mound building centers were here in southern Ohio. Perhaps only 15-20% of these earthworks and mounds remain. A few are preserved in state memorials and national parks. The remnants of many earthworks and individual mounds remain on private property. This activity looks at the location of a few of the larger publicly owned sites.

Procedure:

1. Show students the map of Ohio. Explain the background information to the students.
2. Pass out a copy of Map Skills: Absolute and Relative Location to students. Using the information on this sheet and a map of Ohio, have students locate the various sites.
3. Students finish filling in remainder of chart.

Materials:
Copies of "Absolute and Relative Location"
Transparency map of Ohio

Map Skills: Absolute and Relative Location

Absolute location means where something is located using a grid system. On a map you have both an alphabet and number grid lines and latitude and longitude grid lines. These tell exactly where something is located. Relative location means where something is located near or next to. The capital of Ohio's absolute location is 40° N, 83° W and Columbus's relative location is in Franklin county near the Scioto River. Some sites may have the same absolute location on this grid, but still be miles apart.

Fill in the chart below giving either the absolute or relative location for the prehistoric Indian sites of Ohio. Locate these sites on an Ohio map.

Prehistoric Adena, Hopewell and Fort Ancient	Absolute Location alphabet and number lines or latitude and longitude lines	Relative Location city, county, near a river or other landform
Fort Ancient	39°N, 84°W	Lebanon, Warren County, near Little Miami River
Fort Hill State Memorial	39° N 84° W	Sinking Springs, Highland County, near Ohio Brush Creek
Leo Petroglyph State Memorial	39°N, 83° W	Coalton, Jackson County, west of Raccoon Creek
Miamisburg Mound	40° N, 84° W	Miamisburg, Kettering County, near the Miami River
Hopewell Culture National Historical Park, Mound City Group	39°N, 83° W	Chillicothe, Ross County, near Scioto River
Newark	40° N, 82° W	Newark, Licking County near the Licking River
Seip Mound State Memorial	39°N, 83°W	Bainbridge, Ross County, on Paint Creek
Serpent Mound State Memorial	39° N, 83° W	Peebles, Adams County, near Ohio Brush Creek

Note: There are more Adena and Hopewell mound sites around Ohio. See if you can find out where they are.

Map Skills: Absolute and Relative Location

Absolute location means where something is located using a grid system. On a map you have both alphabet and number grid lines and latitude and longitude grid lines. These give exact location. Relative location gives the city, county or landform the site is near. The capital of Ohio's absolute location is 40' N, 83'W and Columbus's relative location is in Franklin county near the Scioto River. Some sites may have the same absolute location on this grid, but still be miles apart

Fill in the chart below giving either the absolute or relative location for the prehistoric Indian sites of Ohio. Locate these sites on an Ohio map.

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Newark		Newark, Licking County near the Licking River
Seip Mound State Memorial	39'N, 83'W	
Serpent Mound State Memorial		Peebles, Adams County, near Ohio Brush Creek

Note: There are more Adena and Hopewell mound sites around Ohio. See if you can find out where they are.

Create a National Park

Time: 1 hour

Location: Pre or Post Site

Strands:

Learner Outcomes: Fourth Grade: Citizenship #17

Sixth Grade: Citizenship #20



-
- Objectives:**
- 1) Students will be able to cite reasons why national parks are needed.
 - 2) Students will describe characteristics of a national park.
 - 3) Students will discuss problems facing national parks.
 - 4) Students will use writing skills to write a "brochure" on their park.

Method: Students create a "mini" national park in a specified outdoor area, providing visitors with information about their park and advertising it to the general public. Through this activity, students experience some of the problems national parks experience.

Background: The National Park system currently has 375 national park areas. These areas have been set aside to preserve and protect the best of our natural, recreational and cultural resources for the use and enjoyment of all persons, including future generations.

Parks are as diverse as their visitors, and may offer one or more of the following: camping (tent or motorhome), wilderness hiking trails, scenic overlooks, motor trail routes, campfire programs, nature trails, boat/tram tours, canoeing, boardwalks, rock climbing and swimming. Some parks even have lodges.

A park may have several outstanding features for which it was set aside, or it may be preserved for one specific feature. National Parks preserve the natural and cultural resources that are of national significance. Mound City was set aside in 1923 as Mound City Group National Monument because it is a unique prehistoric site. In 1992 the name was changed to Hopewell Culture National Historical Park to reflect the addition of several other significant Hopewellian sites to the park.

Each day brings new challenges to a park and its resources. Some parks, like Everglades National Park, have numerous problems facing them, while others have fewer problems. Hopewell Culture National Historical Park has problems with resource protection, encroaching development and air pollution.

Upon arriving at a national park the visitor receives a park brochure that outlines the major resources and sites to visit. Larger parks have a visitor center where rangers have information about the park. Some parks charge a small entrance fee, while others may not charge at all.

One part of a park ranger's job is to interpret the park resources and problems to the visitors so that they understand the significance of the park. Why? Because parks belong to the people and they must know about these valuable resources to preserve and protect them!

-
- Materials:**
- (for each pair of students)
- Clipboard
 - Paper, pencils
 - Hand lens
 - One 15 foot piece of string
 - Six popsicle sticks
 - Peanuts (at least one per student)

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Suggested Procedure:

1. Discuss the concept of a national park with your students. Ask students if they have ever been to a national park. Students may not realize that Ohio alone has six national park areas. They are: Cuyahoga Valley National Recreation Area, Dayton Aviation Heritage National Historical Park, James Garfield National Historic Site, Hopewell Culture National Historical Park, Perry's Victory and International Peace Memorial and William H. Taft National Historical Site. What makes these different from a state parks or a county parks?
 2. Ask students what they would like in a national park, if they were to create a "perfect park." Why set up a national park? Who owns national parks? Why do we need national parks? Explain that parks protect resources that are of national significance; some parks will protect diversity, air quality, gene pools, while others protect irreplaceable historical structures or prehistorical remains.
 3. Explain to students that they are going to create their own "mini" national park. Pair off the students. Distribute the materials listed on the preceding page to each pair of students.
 4. Assign, or let each pair choose, an outdoor spot for their national park. Using their string, they should rope off the area.
 5. Students must move about their national park on their hands and knees. Using the hand lens, the students should choose the scenic values of their park. A hole might be the Grand Canyon, a rock might be a mountain, a brick might be a prehistoric ruin, for example. The popsicle sticks can be used to mark the trail or scenic spots. As they choose their "scenic spots" students should decide what makes their park unique or worth saving.
 6. Give the class about 20-25 minutes to set up the trail in their park. After the students have marked their parks, they must make a brochure (including a map) for their park. For comparison, show the brochure for Hopewell Culture National Historical Park.
 7. Once the parks are ready for business, the "rangers" (the paired students) must "sell" or advertise their park. They should sell their park by shouting out its attributes. Ask the pairs to split up. One student in the pair should remain in the park to interpret it, while the second visits other national parks. The students may then switch. The peanuts are the entrance fee needed to visit another national park. Every student must visit at least one national park.
 8. After they have visited the national parks, ask the students the following questions: Did they have problems getting visitors to come to their park? Were visitors always careful with the park's resources? Did they have too many visitors? What would they change? What problems occurred? How would they raise money to improve the park's facilities?
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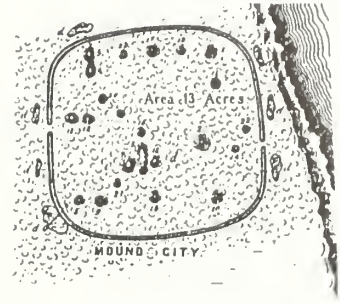
Evaluation:

Name three reasons for having national parks. What can you do to help protect the resources in a national park? Who has the responsibility of preserving and protecting the park for future generations? Write a proposal to get funding to buy a national park.

What do you think?

Subject: History
Time: 20 minutes
Location: Post Site
Strands: Culture

Learner Outcomes: Fourth Grade: Citizenship
 Sixth Grade: Citizenship



.....
Objective: Students will assimilate information learned while on a field trip to Hopewell Culture National Historical Park.

Method: After visiting Hopewell Culture, students fill in the sheet on the Hopewell peoples.

Background: Post visit activity. See introductory materials, "People Who Came Before" for teachers, copies of "The Life and Times of the Hopewell Peoples" for students.

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Suggested Procedure:

1. To summarize their trip to Hopewell Culture, have students fill in the sheet, "What do you think?" You may want to lead a discussion on some of the questions.
2. Lead the students in a discussion of the similarities between their culture and that of the Hopewell.

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Alternate: This activity may be adapted to be used after visiting another mound site.

.....
Materials:
Copies of
"What do you think?"

Name:

What do you think?

You have just completed a trip to Hopewell Culture National Historical Park and learned how the Hopewell peoples lived. What are your impressions of the Hopewell and their way of life? Think about what you have learned then answer the questions below in complete sentences.

1. What are some of the differences between your way of life and that of the Hopewell?

Different clothes (skirts instead of jeans), different work (directly making or obtaining needs), different entertainment (no TV!), different transportation (walk or canoe everywhere instead of cars), different houses (bent pole structures instead of apartments and houses)

2. What do you like most about how the Hopewell lived?

Personal answers may vary

3. What do you think would have been most difficult about being a Hopewell person?

Personal answers may vary

4. What activities did Hopewell men and women do individually? Cooperatively?

Personal answers may vary _____

5. Imagine that you are a Hopewell person of long ago. What skills do you use in your everyday life?

Flint knapping, cooking, weaving, plant knowledge, hunting, fishing, fire making

Name:

What do you think?

You have just completed a trip to Hopewell Culture National Historical Park and learned how the Hopewell peoples lived. What are your impressions of the Hopewell people and their way of life? Think about what you have learned then answer the questions below in complete sentences.

1. What are some of the differences between your way of life and that of the Hopewell?

2. What do you like most about how the Hopewell peoples lived?

3. What do you think would have been most difficult about being a Hopewell person?

4. What activities did Hopewell men and women do individually? Cooperatively?

5. Imagine that you are a Hopewell person of long ago. What skills do you use in your everyday life?

PROBLEM SHEETS

for junior and senior high students*

1. **BUILDING FOR THE FUTURE** - a factory that will provide needed jobs for the community is about to be built on the site of prehistoric earthworks.
2. **THE CASE OF THE BRONZE DISEASE** - should priceless Indian artifacts be displayed for the public if it means that they will deteriorate.
3. **POTHUNTING** - should archeological remains be dug up by amateurs to sell for profit.
4. **THE DISCOVERY** - what would you do if you discovered the site of a prehistoric village.
5. **GRANDPA'S MOUNDS** - your grandfather asks your advice on what to do about Indian mounds found on his property.
6. **A FANTASY IN TIME** - a Hopewell Indian travels through time to visit Mound City in the 1990s.

These sheets describe hypothetical situations concerning artifacts, archeology and the environment. Following the description of the problem there are questions which help clarify the issues raised. At the end of the problem participants are asked to make a decision in response to the problem.

There are no right or wrong answers in the final decisions. Encourage students to explore positive options or win-win solutions. Participants should make their decisions after fully discussing the alternatives and the issues involved in each problem. Although the problem sheets are labeled for junior and senior high classes, they can be adapted for other age groups.

OBJECTIVES

1. Participants will become more aware of conservation problems in archeology.
2. Participants will explore and express their values in addressing the problems.
3. Participants will learn to consider diverse viewpoints in problem solving.
4. Group members will learn how to reach a consensus.

* Activities can be adapted for other classroom levels.

WAYS TO USE THE PROBLEM SHEETS

1. Divide the group into smaller units of 4 to 7 individuals and give each person a problem sheet. Each group can deal with a different problem, or two or more groups can work on the same problem. Instruct individuals to read the problem and then write down their responses to the questions that follow. After each individual responds to the questions on paper, they should discuss all the questions as a group. The whole group should then reach a consensus for the final decision. Give the small groups about 30 minutes to work on their problems. Then gather all groups and let each group present its problem and final decision to the rest of the group. They can also discuss some of the arguments they considered in reaching their final decision.
2. Divide into small groups as described above. Assign problems to each group. Instruct individuals to role play a position. For instance, in the **BUILDING FOR THE FUTURE** problem, one person can assume the role of an historical society member, another can be the farmer who owns the land, and another can represent the Acme Motors Company. After 30 minutes of discussing the problem, the small group can present their problem to the rest of the group. You can also have the individuals in the small groups role play the positions in front of the rest of the group, which can then reach a final decision based on the arguments presented. Keep in mind that win-win situations are possible and positive results for both sides can be achieved.
3. Have the whole group read and discuss the problem and the questions. Each individual can write a final decision on paper and submit it to the group leader.
4. Small groups or the entire class can engage in a debate over a question in any problem, or the final decision of any problem. For instance, the group can divide into pro and con sides which will debate the final decision in **GRANDPA'S MOUNDS**. The group can debate the advantages of living in 197 A.D. vs. 1990s in **A FANTASY OF TIME**.

These are only suggestions for using the problem sheets. Feel free to develop a strategy which will work best for you.

BUILDING FOR THE FUTURE

THE PROBLEM

The Acme Motors Company has just applied for a building permit from the County Planning Commission. The company would like to build an automobile factory on property which is now being farmed. The land also has a large Hopewell earthwork on it, known as the Chillicothe Earthworks.

Acme Motors stated that the land they chose for the factory is the most suitable for their purposes. If they are not granted the building permit, they plan to construct the factory in another state.

Acme Motors also explained that the factory would provide construction jobs for about 400 workers. When the factory is finished in two years, it will provide 3,000 permanent jobs. The Chillicothe Earthworks will be completely destroyed by the construction.

QUESTIONS

1. What objections, if any, will the members of the local historical society have to this proposal?

BACKGROUND INFORMATION

They don't always take the lead in the protection of a site, due to lack of resources.

2. What does the present land owner have to say about the project?

POSSIBLE SUGGESTIONS

Maybe his family has owned the land for 150 years. Maybe he bought the land about 3 years ago.

3. What does Joe Cranium have to say about it?

BACKGROUND INFORMATION

He just got laid off from his job, he has a wife and five kids and worries about the high unemployment rate in the county.

POSSIBLE SUGGESTIONS

Maybe he has 2 kids going off to college and needs money for tuition. Maybe his wife will have to work full time while he stays home with the kids. Maybe he hopes to get a job with the factory.

4. What do the archeologists at the Ohio Historical Society have to say about the project?

BACKGROUND INFORMATION

There are no Ohio laws that protect archeological sites if they are owned by private individuals. They can survey it and have salvage excavation work done on the site if requested.

5. Are the Chillicothe Earthworks valuable for people who will live here in 200 years?
6. Would someone living in California be concerned about this project?

POSSIBLE SUGGESTIONS

NO because it has no direct effect on them personally.

YES because the company might choose to build its factory in their area (bringing in more taxes, jobs, etc).

YES because they are concerned about preserving prehistoric sites and do not want to see another site destroyed.

7. If the building permit is granted, what can the citizens of Ross County who oppose the project do to help stop the construction?

POSSIBLE SUGGESTIONS

Sign a petition. Students can write to President, Congressmen, Senators, President of the company. They can hold town meetings, and get state or local historical societies involved.

8. What would be the position of local government officials and why?

POSSIBLE SUGGESTIONS

Boost local taxes and the economy. Give tax incentives to businesses wanting to relocate here. Loss of tourism because of the destruction of sites.

FINAL DECISION

Should the Planning Commission grant the Acme Motors Company the building permit? Could there be a win-win alternative?

THE CASE OF THE BRONZE DISEASE

THE PROBLEM

While looking at some Hopewell artifacts in the local historical museum, you notice that some of the copper artifacts have a suspicious looking white powder on them. You also notice a piece of fabric adhering to a copper artifact which looks faded from the exhibit lights. It is tattered and looks as if threads from the fabric have fallen to the bottom of the case.

You find the curator of the museum and point out what you have seen. The curator is somewhat surprised at your observations, because he/she had not noticed these things before. They tell you that the white powder on the copper artifacts is probably bronze disease, a reaction which can eat holes through the metal. It occurs when copper artifacts are quickly exposed to air after excavation, causing unstable cuprous chloride to form on the surface of metal. If moisture combines with cuprous chloride, then deterioration due to the bronze disease can begin. He/she tells you there are ways to check the disease, but the artifacts must be kept in a low humidity environment. You notice that the cabinets in which these artifacts are stored appear to be poorly made, with cracks at the edges. They also use normal light bulbs in the cases.

QUESTIONS

1. Should you be concerned about the care these artifacts are getting?

POSSIBLE SUGGESTIONS:

YES these things represent a priceless heritage.

NO you are not a member of the museum.

YES you work at another museum and want to transfer the artifacts to your museum where they will get better care.

2. Do the exhibit cases provide adequate protection for the artifacts? What could be done with them?

3. Should artifacts be put on display when doing so will accelerate their deterioration?

POSSIBLE SUGGESTIONS

YES so that people can learn about the past.

YES by seeing these objects, people might bring other things to the museum.

NO because there are no other objects like this and they can not be replaced.

4. Should we try to save all artifacts from deterioration? What are some of the problems involved?
5. What is the value of artifacts such as these?

POSSIBLE SUGGESTIONS: They can not be replaced. They can be studied so we can learn more about the Hopewell. They could be sold for a lot of money.

6. Should anyone be allowed to handle an artifact? Why?

POSSIBLE SUGGESTIONS:

YES they have to be properly taken care of.

NO handling them could cause more deterioration.

7. Is the curator at fault for the artifacts being in that condition?

FINAL DECISION

What should the curator do about these artifacts in the museum?

POTHUNTING

THE PROBLEM

You are out hiking on private property when you come upon two people who are digging in a mound of earth. You notice that more than just dirt is being removed from the mound. You see charred bones, metal objects, shiny pieces of mica, and other items being put in a sack. The two people are arguing over who should get to keep one of the objects which looks like a stone pipe.

QUESTIONS

1. What are your immediate feelings when you discover these two people?
2. One of the people offers you a 6 inch obsidian spear point from the mound in exchange for you not telling anyone what you have seen. You know you can get a lot of money for it on the collectors market. Do you accept the offer?
3. The things the people are removing from the mound are some two thousand years old. Who really owns mounds and the burials and artifacts within them?

POSSIBLE SUGGESTIONS:

The person who owns the land. The Native Americans whose ancestors built the mounds. The agency responsible for archeology in the state. All of us because this is part of the prehistory of the area.

4. Would your feelings about the situation and your course of action change if the mounds were in a National Park?
5. What would happen if you reported what you saw?

POSSIBLE SUGGESTIONS: The two people who did the digging might come after you. You might make the landowner mad and you might not be able to hike on his land again. You might make the landowner happy by reporting the problem. You have stopped the destruction of the site.

FINAL DECISION

What will you do about the situation?

THE DISCOVERY

THE PROBLEM

You are out hiking in the woods on private property, and you come across an area that is covered with flint chips, charred bones, and pottery sherds.

QUESTIONS

1. What do you think these things are from?
2. Would these things be valuable to you in any way?

POSSIBLE SUGGESTIONS: You are a Native American and you might consider this site or these things sacred. You could sell them for money. They represent part of the prehistory of the area. They have value for archeological study.

3. Would an archeologist find these things valuable?
4. You are curious if you can find anything else by digging deeper into the soil. Is this a good idea? Why or why not?
5. What should you do if you find these things on property owned by the Federal Government?

POSSIBLE SUGGESTIONS:

Report the site to the authorities. Say nothing. Come back and dig the area up because it is public property.

FINAL DECISION

What are you going to do, if anything, about this discovery?

GRANDPA'S MOUNDS

THE PROBLEM

You know of several Hopewell mounds which exist in the woods on your grandfather's property out in the country. As far as you know, they have never been excavated by archeologists or dug up by anyone else. Your grandfather never really had an interest in the mounds until now. He asks you if he should do anything about them. He mentions that he does not plan to clear the area for farming, and does not foresee any other way in which the mounds would be disturbed in the future.

QUESTION

1. Should you tell anyone else about the mounds? What are some of the advantages and disadvantages of doing so?

POSSIBLE SUGGESTIONS: Increase general knowledge in archeology. Increase the possibility of vandalism and looting.

2. How do you think the local historical society might feel about the mounds?

POSSIBLE SUGGESTIONS: Want to preserve them as part of the prehistory of the area. Not interested because they are not interested in archeology.

3. What might the archeologists at the Ohio Historical Society say about these mounds?
4. How might a group of Native Americans living in the area feel about this information?
5. Would your advice change if the mounds were on property which your grandfather was planning to sell for a housing development?
6. Are there any ways you can insure that the mounds are preserved?

POSSIBLE SUGGESTIONS Have the land turned into a park. Have a deed restriction added to the property title. Not worry about it because your grandfather does not plan to sell the land.

7. Should the mounds be excavated?

FINAL DECISION

What do you tell your grandfather? Why?

A FANTASY IN TIME

THE PROBLEM

You are a Hopewell Indian who has been able to slip through time to the year 1997. You find yourself floating on the Scioto River in a canoe and realize that your surroundings have changed since the year 197 A.D.

QUESTIONS

1. Describe in detail the things that have changed. Consider the plants, animals, the river, the air, (the overall environment). Use all your senses.
2. How do you feel about these changes? Are they good or bad?
3. What are some of the causes behind these changes?
4. Would you rather be living back in 197 A.D. or 1997? Why?

POSSIBLE SUGGESTIONS: Better living conditions today. Not as many people or problems in 197. More crowded conditions today. Very little pollution in 197.

5. Could the inhabitants of the last 100 years have changed the way things are in 1997? What could they have done differently?

FINAL DECISION

Should the 20th century inhabitants have allowed all these changes to occur? Be specific.

SURVIVAL IN THE WILD

You awake one morning and find yourself in a wooded area along the bank of a rock filled river. A check of the area reveals the fact that no one else is living in the area. There are no buildings, no stores, no signs of civilization as you know it. All you have with you is a book for identifying plants. In order to survive you will need to provide food, tools, and shelter for yourself using the things that nature provides.

QUESTIONS

1. Food will be your first concern. What food sources are available to you?

POSSIBLE SUGGESTIONS

Will your sources of food be available all year long? How will you determine what is safe to eat?

2. You have decided to grow your own food. What plants are available to you? What tools will you need to prepare a garden?

POSSIBLE SUGGESTIONS Are there natural food plants available? What area would you choose for a garden and how will you clear it? Where can you get tools from?

3. Hunting may be one way of obtaining food. What hunting methods are available to you? How can you create tools or weapons?

POSSIBLE SUGGESTIONS You might think of a gun, but can you make one from the things around you? What about traps or snares? What about making a spear or a bow and arrow?

4. Describe how you could store food for use at a later time.

POSSIBLE SUGGESTIONS Could you use a microwave oven? What about the river? What about the heat from the sun?

5. You have decided to build a shelter for the coming winter. What materials are available to you and how will you get what you need?

POSSIBLE SUGGESTIONS

What kind of tools will you need? How can you cut down trees? Will the river be of any help?

6. Is the river important to your survival?

POSSIBLE SUGGESTIONS Do you need water for cooking and cleaning? What sources of food come from the river? Could the river be a way out of this area?

7. Would survival be easier in this area or in a desert?

POSSIBLE SUGGESTIONS Consider your sources of food, water and tools.

FINAL DECISION

What skills would you need to develop in order to survive?

Scheduling a Field Trip

Call Hopewell Culture National Historical Park at 614-774-1126 to schedule a field trip. A ranger will assist you with making arrangements for the field trip. We will make every effort to provide you with a ranger-led program, but schedule your program well in advance. We prefer not to schedule groups more than three months in advance. Keep in mind that October, April and May are very busy times at the park.

Fees are waived for educational field trips to the parks by school classes. Activities listed as on-site activity can be led by park staff or by the teacher here at the park. Please request the program you would like when scheduling. You may conduct your own program, but please notify the park you are coming.

Two weeks prior to your field trip, you will receive a confirmation notice. Check to verify that all the information in the confirmation letter is correct.

In addition, you will receive a copy of "Guidelines for Field Trips to Hopewell Culture National Historical Park", a brochure and a list of presite materials currently available. Copies of the confirmation letter, guidelines and presite materials are on the following pages. A park brochure is also included in the Support Materials Section.

Sample letter

Date

Teacher
School
Address
City State

Dear “Teacher’s name”:

Your group has been scheduled to visit Hopewell Culture National Historical Park on (date) at (time). If for any reason your plans should change, please contact us immediately.

Your program, (name of program or ranger led tour) will last about (number of minutes)*. The Mound City Visitor Center has restroom facilities, a book sales area, exhibits and an auditorium where our seventeen minute video, "Legacy of the Mound Builders", is shown. Mound City is a thirteen acre square enclosure and the self guiding trails are less than a mile, mostly level and partially shaded. Picnic facilities are available behind the visitor center on a first come, first served basis.

To insure the best possible learning experience, we suggest that you review the attached Guidelines for Fieldtrips. We have also enclosed a map of Chillicothe to assist in your planning.

If you have questions, or if we can be of any further assistance, please contact the park at 614-774-1125.

Sincerely,

Rebecca Jones
Park Ranger

Enclosures:

*Program duration varies from program to program, check duration time listed in curriculum guide.

To ensure that your class has the best possible learning experience, please follow these...

GUIDELINES FOR FIELD TRIPS TO HOPEWELL CULTURE NATIONAL HISTORICAL PARK

Planning Your Visit:

- *Before bringing your class to the Mound City Unit of Hopewell Culture National Historical Park, we suggest that you visit the area personally to become acquainted with our resources and facilities.
- *We will make every effort to have a park ranger meet with your group if arrangements are made prior to your visit.
- *Plan to spend about 1-1/2 to 2 hours at Mound City. At least one hour for every 30-40 students, will be needed for a tour of the park and additional time for stops at the museum and outdoor signs and exhibits.

ORIENTATION BEFORE YOUR VISIT:

- *Orient your class to the objectives of the trip, lunch arrangements and regulations. Involve the students in planning what to wear and bring. Please remind your class that this is a school day and they will be involved in a learning experience.
- *Orientation kits (See "Educational Programs Available for Loan", p. 163-164) are available. Contact the park for more information.
- *A series of "Activity Sheets" are available for your use.
- *More information about these programs and special activities is available upon request at the address or telephone listed below.

SUPERVISION:

- *Provide at least one adult for every ten students. This is necessary for the safety and supervision of the group. The adults should be physically able and willing to participate.
- *Group leaders are expected to help with proper behavior. Rangers will talk with the group. However, it is the teacher's responsibility to maintain order and to plan and direct the majority of the class activities at Mound City. Rangers may terminate a program because of extremely disruptive or unsafe behavior.

*To protect park resources, please ensure that your class understands that no collecting of any natural or human objects is allowed. We also request that all visitors stay off the mounds and the surrounding earth wall.

AT MOUND CITY:

*Please arrive promptly for any scheduled programs. If your schedule changes please notify us at (614) 774-1125 as soon as possible.

*Wear clothing appropriate for outdoor activities.

*The paved section of our parking lot is reserved for automobiles. Please pull your bus around the loop and park on the grass in the space indicated.

*Restrooms and drinking water are available in the Visitor Center. Food and beverage are not sold in the park and are not allowed in the visitor center.

A small picnic area is located near the Visitor Center and is available on a first-come basis. Groups requiring larger facilities may wish to use Yoctangee Park in Chillicothe. That park has three covered picnic shelters which are available by reservation. Please contact the Chillicothe Recreation Department by mail at 35 South Paint Street, Chillicothe, Ohio 45601, or by phone at (614)772-5626 to reserve the shelters. Another picnic area with a covered shelter is available at Camp Sherman Memorial Park, 1.5 miles south of Mound City on Highway 104. Playground equipment is located at both Yoctangee and Camp Sherman Parks. A number of fast food restaurants are available in the area.

Educational Programs Available For Loan from

Hopewell Culture National Historical Park
16062 State Route 104
Chillicothe, Ohio 45601
(614) 774-1125

35mm SLIDE PROGRAMS: All slide programs are packed in Kodak “Carousel” drums and mailed free of charge. The programs must be returned by certified mail at the borrower’s expense.

AN INTRODUCTION TO THE HOPEWELL PEOPLE (all ages)

A 15-minute program designed to introduce students to the Hopewell people and to the archeological story of the Mound City Unit of Hopewell Culture National Historical Park. The program kit includes a written narrative, a cassette tape with recorded narrative and audible cues for slide changing, a replica of an effigy pipe, several postcards picturing artifacts, and a booklet about Hopewell artwork. The program can be shown to students either before or after a visit to Hopewell Culture National Historical Park, to prepare them for their visit or as a review and summary. The program must be returned by the date indicated on the information card in the kit.

INTRODUCTION TO ARCHEOLOGY I (all ages)

A 15-minute program designed to help the student develop a definition and understanding of archeology. The program kit includes slides and written narrative, several examples of tools of the archeologist, and instructions on how the class can perform a simple “excavation” on the classroom trash can. This last exercise is designed to encourage the students to use archeological techniques they learned in the slide program. This program can be used before or after a visit to Hopewell Culture National Historical Park, or as basic information on the field of archeology.

INTRODUCTION TO ARCHEOLOGY II (6th grade and older)

A 15-minute program designed to be a follow-up to “Introduction to Archeology I”. The slides and narration explain special techniques used in archeology; remote sensing, dendrochronology, palynology, malacology, and Carbon-14 dating. It is designed to encourage a desire for further study of these specialized techniques.

OHIO’S PREHISTORIC PEOPLES (6th grade and older)

A 20-minute slide-tape program, developed by the Ohio Historical Society, that surveys all of Ohio’s prehistoric cultures from the earliest big-game hunters to the coming of the first European explorers.

WE CARE ABOUT EAGLES (all ages)

Developed by the National Wildlife Federation in 1982 to commemorate the 200th anniversary of the bald eagle as our national symbol. This 15-minute slide-tape presentation discusses the historical use of eagles as symbols of power and freedom, the physical adaptations and lifestyles of eagles, and the behavior and habitat of five representative species of eagles. A written text with supplementary information and bibliography is also included.

CAMP SHERMAN IN RETROSPECT (6th grade and older)

A 45-minute program, with two carousel drums, depicts the story of this World War I Army training camp and its effects on the city of Chillicothe. A taped narrative includes WWI music and recorded interviews with local residents who witnessed the construction and demolition of Camp Sherman. A written text is included.

THE OHIO-ERIE CANAL (Third grade and up)

A 30-minute program, with two carousel drums, exploring the Ohio Erie Canal in Chillicothe and the impact the canal had on the development and history of Ross County.

Video

Legacy of the Mound Builders (All ages)

Award winning 17-minute video telling the story of the Hopewell culture. Between 2200-1500 years ago the Hopewell constructed mounds and earthworks and had an elaborate trade network which extended over half the continent.*

More Than Bows and Arrows (Fourth grade and up)

Hour long video documenting the contributions of the American Indians to the development of the United States and Canada. Details a surprising list of contributions Native Americans made to the history of this country.*

Silent Witness: Protecting American Indian Archeological Heritage (Upper grades)

A 31- minute video exploring the destruction and desecration of American Indian archeological sites on public lands. More information is available on this program by calling the park.

* Available for sale through the park's cooperating association.

Other Sites and Resources

Ohio Historical Society
Ohio Historical Center
1982 Velma Avenue
Columbus, OH 43211
(614) 297-2300

Other Sites managed by Ohio Historical Society:

Flint Ridge State Memorial
Ohio Historical Center
7091 Brownsville Rd. SE
Glensford, OH 45054
(614) 787-2476 or 344-1919

Fort Hill State Memorial
Ohio Historical Society
13614 Ft. Hill Rd.
Hillsboro, OH 45133

Fort Ancient State Memorial
Ohio Historical Society
6123 State Route 350
Oregonia, OH 45054
(513) 932-4421

Moundbuilders
Ohio Historical Society
99 Copper Avenue
Newark, OH 43055
(614) 344-1920

Newark Earthworks
Ohio Historical Society
900 Cooper Avenue
Newark, OH 43055
(614) 344-1919 or 344-1920

Serpent Mound State Memorial
Ohio Historical Society
3850 State Route 73
Peebles, OH 45660
(513) 587-2796

Sites managed by Ohio Historical Society, but no facilities:

Leo Petroglyphs
Ohio Historical Society
Leo, OH

Miamisburg Mounds
Ohio Historical Society
Miamisburg, OH

Octagon Earthworks
Ohio Historical Society
Newark, OH

Seip Mound
Ohio Historical Society
Bainbridge, OH

Other sites:
Cahokia Mounds State Historic Site
Illinois Historic Preservation Agency
(618) 346-5160
Site Manager
P.O. Box 681
Collinsville, IL 62334

Other teaching resources:
Cameron Quimbaugh
5267 Gilford Avenue
Indianapolis, IN 46220
(317) 925-6986

Intrigue of the Past: Fundamentals of Archeology
A Teacher's Activity Guide for Fourth through Seventh Grades
by Shelley J. Smith, Jeanne M. Moe, Kelly A. Letts, and Danielle M. Patterson,
U.S. Department of the Interior, Bureau of Land Management,
is a publication of Project Archeology's Heritage Education Program.
It is aimed at educating teachers and students about the need to protect their cultural heritage.

Intrigue of the Past may be ordered for \$15.00 from the Natural Science Teachers Association
(800) 722-NSTA or by calling Cindy Ramsay at (303) 882-4811.

REGIONAL OVERVIEW

Betty Ian Ballantine, editor, *The Native Americans* (Atlanta, GA: Turner Publishing Inc., 1993)

Mary and Franklin Folsom, *America's Ancient Treasures* (Albuquerque: University of New Mexico Press, 1983)

James B. Griffen, *Archaeology of Eastern United States* (Chicago, University of Chicago Press, 1952)

Jesse D. Jennings, *Ancient North Americans* (San Francisco: W.H. Freeman, 1983)

Jesse D. Jennings and Edward Norbeck, editors, *Prehistoric Man in the New World* (Chicago: University of Chicago Press, 1964)

Noel D. Justice, *Stone Age Spear and Arrow points of the Midcontinental and Eastern United States* (Bloomington, IN: Indiana University Press, 1987)

Phillip Kopper, *Smithsonian Book of North American Indians* (Washington, D.C.: Smithsonian Books, 1986)

Ronald Mason, *Great Lakes Archeology* (New York: Academic Press, 1981)

James L. Murphy, *Archaeological History of the Hocking Valley* (Athens, Ohio: Ohio University Press, 1975)

Martha A. Potter, *Ohio's Prehistoric Peoples* (Columbus, Ohio: Ohio Historical Society, 1968)

Lynda Shaffer, *Native Americans Before 1492* (Armonk, NY: M.E. Sharpe, 1992)

Dean R. Snow, *Archaeology of North America* (New York, Chelsea House Publishers, 1989)

Gene S. Stuart, *America's Ancient Cities* (Washington, D.C.: National Geographic Society, 1988)

Stuart Struever and Felicia Antonelli Holton, *Koster - Americas in Search of their Prehistoric Past* (New York: Doubleday and Company, 1985)

William C. Sturtevant, "Northeast," *Handbook of North American Indians*, Vol. 15 (Washington, D.C.: Smithsonian Institution, 1978)

MOUNDBUILDERS - HOPEWELL AND ADENA

Davis S. Brose, James A. Brown and David W. Penny, *Ancient Art of the American Woodland Indians* (New York: Harry N. Abrams Publishers, 1985)

Davis S. Brose and N'omi Greber, editors, "Hopewell Archaeology: The Chillicothe Conference" *MCJA Special Paper #7* (Kent, OH: Kent State)

Joseph R. Caldwell and Robert L. Hall, editors, "Hopewellian Studies" *Illinois State Museum Scientific Papers*, volume 12 (Springfield, IL: Illinois State Museum, 1964)

John B. Carlson, "Hopewell - Prehistoric America's Golden Age" *Early Man*, Winter, 1979

Don W. Dragoo, *Mounds for the Dead* *Annals of the Carnegie Museum* volume 37 (Pittsburgh, Carnegie Museum, 1963)

Kenneth B. Farnsworth and Thomas E. Emerson, editors, *Early Woodland Archeology* (Kampsville, IL: Center for American Archaeology Press, 1986)

Paul E. Hooge and Bradley T. Lepper, editors, *Vanishing Heritage - Notes and Queries about the Archaeology and Culture History of Licking County, Ohio* (Newark, OH: Licking County Archaeology and Landmarks Society, 1992)

Bradley T. Lepper, *People of the Mounds: Ohio's Hopewell Culture* (Ohio: Hopewell Culture National Historical Park and Eastern National Park and Monuments Association, 1995)*

Paul Pacheco, *A View of the Core: A Synthesis of Ohio Hopewell Archaeology* (Columbus, Ohio, Ohio Archaeological Council, Inc., 1996)

Olaf H. Prufer, "The Hopewell Cult" *Scientific American*, volume 211 #6, 1964, also in *New World Archaeology - Readings from Scientific American* (San Francisco: W. H. Freeman and Company)

Mark F. Seeman, editor, *Cultural Variability in Context* (Kent, Ohio: Kent State University Press, 1992)

Robert Silverberg, *The Moundbuilders* (Athens, OH: Ohio University Press, 1986)

Bruce D. Smith, "Hopewell Farmers of Eastern North America" *Rivers of Change* (Washington, D.C.: Smithsonian Institution, 1993)

Ephriam G. Squier and Edwin Davis, "Ancient Monuments of the Mississippi Valley" *Smithsonian Contributions to Knowledge 1* (Washington, D.C.: Smithsonian Institution, 1848)

William S. Webb and Raymond S. Baby, *Adena People - 2* (Columbus, Ohio: Ohio Historical Society, 1957)

William S. Webb and Charles E. Snow, "Adena People" *Reports in Anthropology and Archaeology* 6 (Lexington, KY: University of Kentucky, 1945)

Susan L. Woodward and Jerry N. McDonald, *Indian Mounds of the Middle Ohio Valley - A Guide to Adena and Ohio Hopewell Sites* (Newark, OH: McDonald and Woodward Publishing Company, 1986)

-----, *The Hopewell Indians: A Coloring Book* (Chillicothe, OH: Eastern National Parks and Monuments Association, 1970)*

ARCHEOLOGY

Jane McIntosh, *The Practical Archaeologist* (New York: Facts on File Publications, 1996)

Dean R. Snow, *Archaeology of North America* (New York, Chelsea House Publishers, 1989)

*Suitable for students.

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